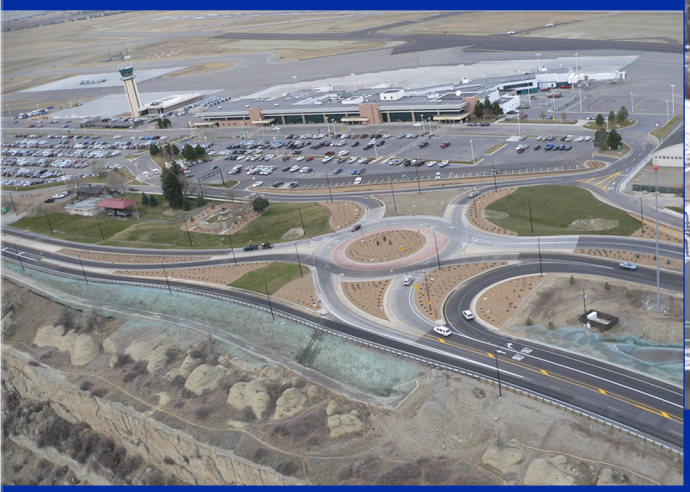
MDT Consultant Services Manual



MONTANA DEPARTMENT OF TRANSPORTATION

2010

PREFACE

The *MDT Consultant Services Manual* has been developed to provide guidance to MDT and Consultant personnel on the MDT Consultant Program. The *Manual* complies with all State and Federal laws, statutes and regulations, and it presents MDT policies and procedures on the Consultant Program's operations. The *Manual* is organized into three major parts:

- Part I "Administration and Procedures"
- Part II "Consultant Selection and Monitoring"
- Part III "Consultant Contract Issues"

The *Manual* presents much of the information normally required for a typical Consultant project; however, it is impossible to address every situation that may arise during Consultant project development. Therefore, MDT and Consultant personnel must exercise good judgment on individual projects and, frequently, they must be innovative in their approach to project management. Where questions arise regarding the appropriate approach, the *Manual* user should seek guidance from Consultant Design Bureau management and other knowledgeable individuals.

The *MDT Consultant Services Manual* was developed by the MDT Consultant Design Bureau with assistance from the engineering consulting firm of Roy Jorgensen Associates, Inc., and their subconsultant CH2M HILL, Inc. The *Manual* Review Committee included:

Tim Conway	Consultant Design Engineer, Montana Department of Transportation
Tom Martin	(Former) Consultant Design Engineer, Montana Department of Transportation
Roy Peterson	Consultant Plans Engineer, Montana Department of Transportation
Michael Dalsoglio	Project Coordinator, Consultant Project Engineer, Montana Department of Transportation
Jay Skoog	Montana Chapter of the American Council of Engineering Companies
Lloyd Rue	Federal Highway Administration, Montana Division Office
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Steve Alters	CH2M HILL, Inc.
Cindy Potter	CH2M HILL, Inc.
Ronald Crumm	CH2M HILL, Inc.

MDT CONSULTANT SERVICES MANUAL
(Revision Process)

The *MDT Consultant Services Manual* is expected to be updated periodically based on changes to laws, regulations, policies, procedures, etc. Suggested changes can be emailed to the Consultant Design Engineer.

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MDT CONSULTANT SERVICES MANUAL

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Chapter 1
MDT CONSULTANT PROGRAM

1.1 GENERAL

1.1.1 Mission Statement

MDT's mission is to serve the public by providing a transportation system and services that emphasize quality, safety, cost effectiveness, economic vitality and sensitivity to the environment.

To accomplish its mission effectively, MDT uses outside Consultants when it lacks the in-house resources or technical expertise to perform the work. Consultants are an extension of MDT staff, capable of providing additional skills, experience, expertise and quality work without increasing in-house staff. Consultants can also provide independent opinions to MDT staff and, in some cases, opinions that may be more readily accepted by the public on sensitive projects and issues.

1.1.2 Authority

The *MDT Consultant Services Manual* has been prepared by the Consultant Design Bureau, reviewed by MDT management and approved by the Director of Transportation. This *Manual* has been approved by the Federal Highway Administration in compliance with applicable Federal regulations at the time of *Manual* publication.

1.1.3 *Manual* Overview

1.1.3.1 Basic Objective

The basic objective of the *MDT Consultant Services Manual* is to improve the efficiency of the MDT Consultant program in the management of professional service contracts for the Montana Department of Transportation. The Consultant Design Bureau has prepared the *Manual* to facilitate Consultant participation with MDT and to guide MDT staff who works with Consultants in the MDT program. The *Manual* describes MDT procedures, guidelines and formats for the fair and impartial process of selecting, negotiating with and monitoring Consultants.

1.1.3.2 Summary

The *MDT Consultant Services Manual* is organized into three major Parts:

1. Part I "Administration and Procedures." The primary audience for Part I is the staff of the Consultant Design Bureau, especially the Consultant Project Engineers (CPEs). The

discussion summarizes the functional responsibilities of selected MDT units, the coordination between the Consultant Design Bureau and other MDT units, and the various internal "housekeeping" responsibilities of the Bureau (e.g., correspondence, records, files).

2. Part II "Consultant Selection and Monitoring." Part II provides guidance on the authorization, selection and monitoring of Consultants. The *Manual* documents MDT procedures for engaging professional service contracts for the entire process including:

   - establishing the need for Consultant services,
   - receiving authorization to secure Consultant services,
   - selecting a Consultant through a qualification-based process,
   - negotiating with a Consultant,
   - monitoring Consultant work, and
   - evaluating Consultant performance.

3. Part III "Consultant Contract Issues." Part III discusses MDT policies and procedures on MDT auditing and accounting policies and procedures and on Consultant contract provisions (e.g., insurance, certificates, subcontracting.)

1.1.3.3 Coordination with Other MDT Policies

MDT policies and procedures have been documented in a variety of sources (e.g., State Statutes, memoranda, other MDT Manuals). The procedures contained in this *Manual* are intended to supplement and assist in the implementation of various MDT policies, not to supersede them. Any conflicts that may exist between this *Manual* and MDT policies documented elsewhere are unintentional. If any conflicts are discovered, notify the Consultant Design Engineer.

1.1.4 Impetus for Using Consultants

1.1.4.1 General

MDT maintains a staff with the resources and technical expertise needed to perform the workload for the majority of the MDT program of projects. When work cannot be performed consistent with the schedule for the MDT program, or when the work requires specialized professional or technical skills not readily available within MDT, Consultants may be employed.

Fluctuations in funding for transportation improvements can have a major impact on the need for Consultant services. In general, if the available funding is significantly increased from State and/or Federal sources, then the preferred strategy may be to augment MDT in-house resources with Consultant services.

1.1.4.2 Specific

MDT may elect to seek Consultant services for a variety of specific reasons, including:

- controversial projects,
- legislative mandates,
- an accelerated project development schedule, or
- emergencies.

1.2 TYPES OF CONSULTANT SERVICES

1.2.1 Overview

MDT uses Consultants for a wide variety of services, which include the following broad categories:

- planning,
- preconstruction,
- construction, and
- other.

Sections 1.2.2 through 1.2.5 identify the specific services within each category and the relative frequency in using Consultant services for each category. For example, if MDT needs services for a wetland study, then MDT would "sometimes" use a Consultant.

1.2.2 Planning

Activity	Usage		
	Frequently	Sometimes	Rarely
Planning Studies			
Feasibility Studies	X		
Corridor Studies	X		
Concept Studies	X		

1.2.3 Preconstruction

Activity	Usage		
	Frequently	Sometimes	Rarely
Environmental			
Biological Studies		X	
Wetland Studies		X	
Hazardous Waste Studies	X		
Historical/Archaeological Studies		X	
Air/Noise Quality Studies		X	
EA & EIS	X		
Cat Ex		X	
Surveying			
Aerial Photogrammetry		X	
Field Surveying		X	
Mapping		X	

Activity	Usage		
	Frequently	Sometimes	Rarely
Traffic Engineering			
Signals		X	
Highway Lighting		X	
Signing/Pavement Markings		X	
Traffic Impact Studies		X	
Safety Engineering Improvements		X	
Hydraulics			
Bridge Waterway Openings		X	
Bridge Scour		X	
Closed Drainage		X	
Floodplain Studies		X	
Erosion Control			X
Structural Design			
Steel Structures		X	
Concrete Structures		X	
Foundation Design		X	
Earth Retaining Systems		X	
Roadway Design			
Geometrics		X	
Pavement Design		X	
Geotechnical		X	
Right-of-Way			
Title Search, etc.		X	
Appraisal			X
Acquisition			X
Plan Preparation		X	
Utilities (Subsurface Utilities Engineering)	X		
Geotechnical Engineering			
Subsurface Investigations		X	
Analysis & Evaluation		X	
Non-Destructive Testing		X	
Landscape Design		X	
Value Analysis			X
Environmental Permitting/Monitoring		X	

1.2.4 Construction Phase

Activity	Usage		
	Frequently	Sometimes	Rarely
Construction Engineering Inspection		X	
Materials Sampling and Testing			X
Shop Drawing Review		X	
Construction Surveying			X

1.2.5 Other

Activity	Usage		
	Frequently	Sometimes	Rarely
Bridge Inspections			
Above Water		X	
Under Water	X		
Engineering Manuals	X		
Architectural Design	X		
Airports	X		
Buildings (Rest Areas, Scale Sites)	X		

1.3 LEGAL AUTHORITY

1.3.1 State Requirements

In general, the MDT Consultant program is authorized by and must comply with all Montana State laws, regulations, Statutes, etc. The Montana Code Annotated (MCA) presents actionable language to implement the laws of the State of Montana. In particular, the MDT Consultant program is governed by the Statutes for Public Projects, A/E Selection, MCA Section 18-8-201, et seq. Other significant State legal requirements that impact the solicitation and management of professional service contracts include those related to insurance (§39-71-400s, §33-9-100s, etc.), professional licenses (§37-65-101 et seq., §37-67-101 et seq.), conflict of interest (§2-2-105, §2-2-201, §2-2-131), and many others.

1.3.2 Federal Requirements

When Federal-aid funds are used, the MDT Consultant program must comply with all applicable Federal laws, regulations, etc., that are administered by the Federal Highway Administration. In general, this includes Federal requirements related to equal opportunity, subcontracting, disadvantaged business enterprises, etc. Specifically for the solicitation and management of professional service contracts, the following briefly discusses the most significant Federal requirements.

1.3.2.1 *Federal Acquisition Regulations* (FAR)

The *Federal Acquisition Regulations* is the primary, authoritative source for the acquisition of supplies and services by government agencies. The fundamental objective of FAR is to:

> *… deliver on a timely basis the best value product or service to the customer, while maintaining the public's trust and fulfilling public policy objectives.*

FAR presents uniform policies and procedures for acquisition by all executive agencies. Very few of the FAR provisions apply to MDT Consultant projects and agreements, with the exception of Part 31 "Contract Cost Principles and Procedures." Part 31 presents cost principles and procedures for:

- the pricing of contracts, subcontracts and amendments to contracts when a cost analysis is performed;
- the determination, negotiation or allowance of costs when required by a contract clause; and
- detailed explanations of specific rules for allowable and unallowable costs.

As an example, all Consultants retained by MDT must meet the FAR requirements for the determination of an indirect cost rate. Chapter 11 of the *MDT Consultant Services Manual*

discusses MDT policies and procedures for compliance with FAR for the MDT Consultant program.

1.3.2.2 Federal Highway Administration

The 1972 passage of the *Brooks Act* represents the origin of current FHWA regulations for contracting procedures for State DOTs. This *Act* required that Consultant selection be based first on qualifications only and that negotiations should then follow on the cost of services. The *Act* mandated that the following steps be used in the procurement of architectural and engineering services:

- review of qualification statements and performance data submitted by Consultants;
- discussion with no less than three firms on concepts and project approaches;
- selection of no less than three firms based on qualifications; and
- negotiation with the best qualified firm on compensation.

Over time, the term "qualifications-based selection" (QBS) has become common.

In general, the FHWA requirements are presented in 23 CFR Part 172 "Administration of Engineering and Design Related Service Contracts," which is the governing legal requirement for the solicitation, negotiation and management of professional service contracts. The Part 172 policies and procedures apply to Federally funded contracts and have been issued:

> *… to ensure that a qualified consultant is obtained through an equitable selection process, that prescribed work is properly accomplished in a timely manner, and at fair and reasonable cost.*

23 CFR Part 172 discusses methods of procurement, audits and approvals. See Chapter 11 for more discussion.

1.4 TENTATIVE CONSTRUCTION PLAN (TCP)

The MDT Tentative Construction Plan (TCP), commonly known as the "Red Book," is the MDT financial plan for delivering projects. The following summarizes the important features of the TCP:

1. Purpose. The basic purpose of the TCP is to document the amount of highway funding available in each of the upcoming five Fiscal Years (FY). The funding is segregated by month, by geographic District and by source of funding (i.e., Federal and State). MDT updates the TCP every year, typically in August or September.

2. Fiscal Year. The State FY is from July 1 to June 30. The Federal FY is from October 1 to September 30. The TCP is based on the Federal FY.

3. Letting Date. The TCP includes a "letting date," which is the anticipated date that the project will be let to Contract.

4. Ready Date. The TCP includes a "ready date," which is typically three months before the letting date and documents the date that the project is ready for the Contract Plans Bureau to initiate preparation for letting the project. Sometimes, the ready date is more than three months in advance of the letting date. When this occurs, the project is typically intended to be a backup for a project that may not meet the scheduled letting date.

5. Consultant Completion Date. For all Consultant-designed MDT projects, the Consultant is expected to complete the project by the completion date in the contract, which may or may not correspond with the ready date.

6. Updating Construction Costs. The TCP process involves accurate construction costs used to establish a fiscal plan. All Consultants with active projects are required to update construction costs.

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Chapter 2
ORGANIZATION AND AUTHORITY

2.1 GENERAL

Chapter 2 discusses:

- the overall organization of the Montana Department of Transportation,
- the organization and authority of the Consultant Design Bureau,
- the functional responsibilities of those units in the Engineering Division, and
- the functional responsibilities of selected MDT units outside of the Engineering Division.

Chapter 2 presents the responsibilities of MDT units independent of their interaction with one another. Chapter 3 discusses the coordination between the Consultant Design Bureau and selected units external and internal to MDT.

Figure 2.1-A presents the organization of MDT as of 2009.

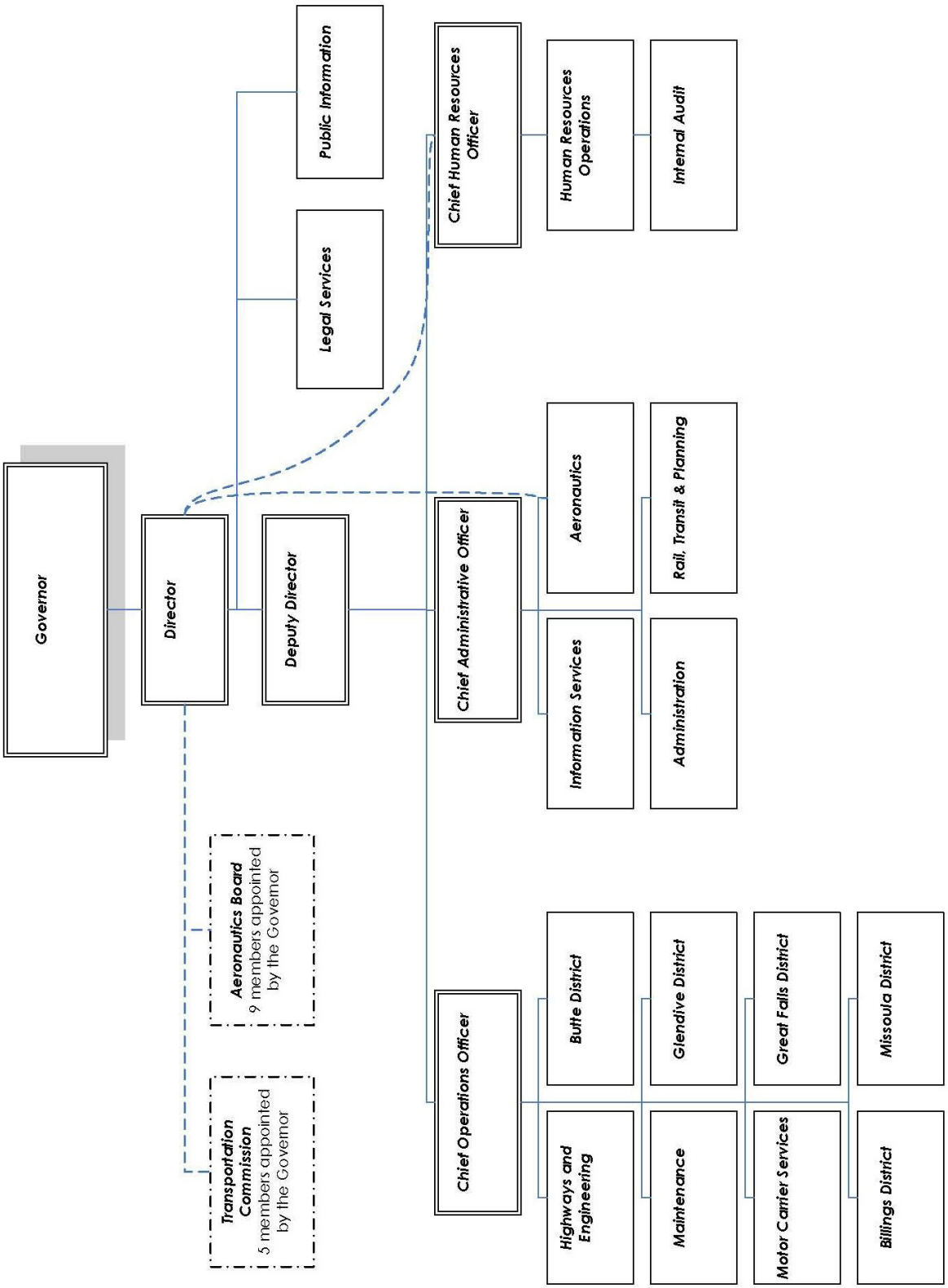

Figure 2.1-A — MDT ORGANIZATION

2.2 CONSULTANT DESIGN BUREAU

2.2.1 General

The Consultant Design Bureau is within the Preconstruction Program of the Engineering Division. The Bureau has the overall responsibility for the administration and management of the MDT Consultant program and the MDT CTEP program. Figure 2.2-A presents the organization of the Consultant Design Bureau.

In general, the Consultant Design Bureau's responsibilities include (but are not limited to):

- advertising for Consultant services,
- maintaining prequalification lists,
- preparing RFQs and RFPs,
- overseeing the Consultant evaluation/selection process,
- conducting contract negotiations,
- processing and executing Consultant contracts,
- processing Consultant progress payments,
- processing contract amendments,
- monitoring project progress,
- monitoring work received versus payments made,
- resolving disputes, and
- closing out contracts.

Throughout the *MDT Consultant Services Manual*, the discussion identifies the responsibilities and authorities of the various units and positions within the Consultant Design Bureau. This applies to, for example, Consultant selection and monitoring (Part II) and contract issues on Consultant projects (Part III). Section 2.2 documents the major responsibilities of the Bureau; it is not intended to be all inclusive.

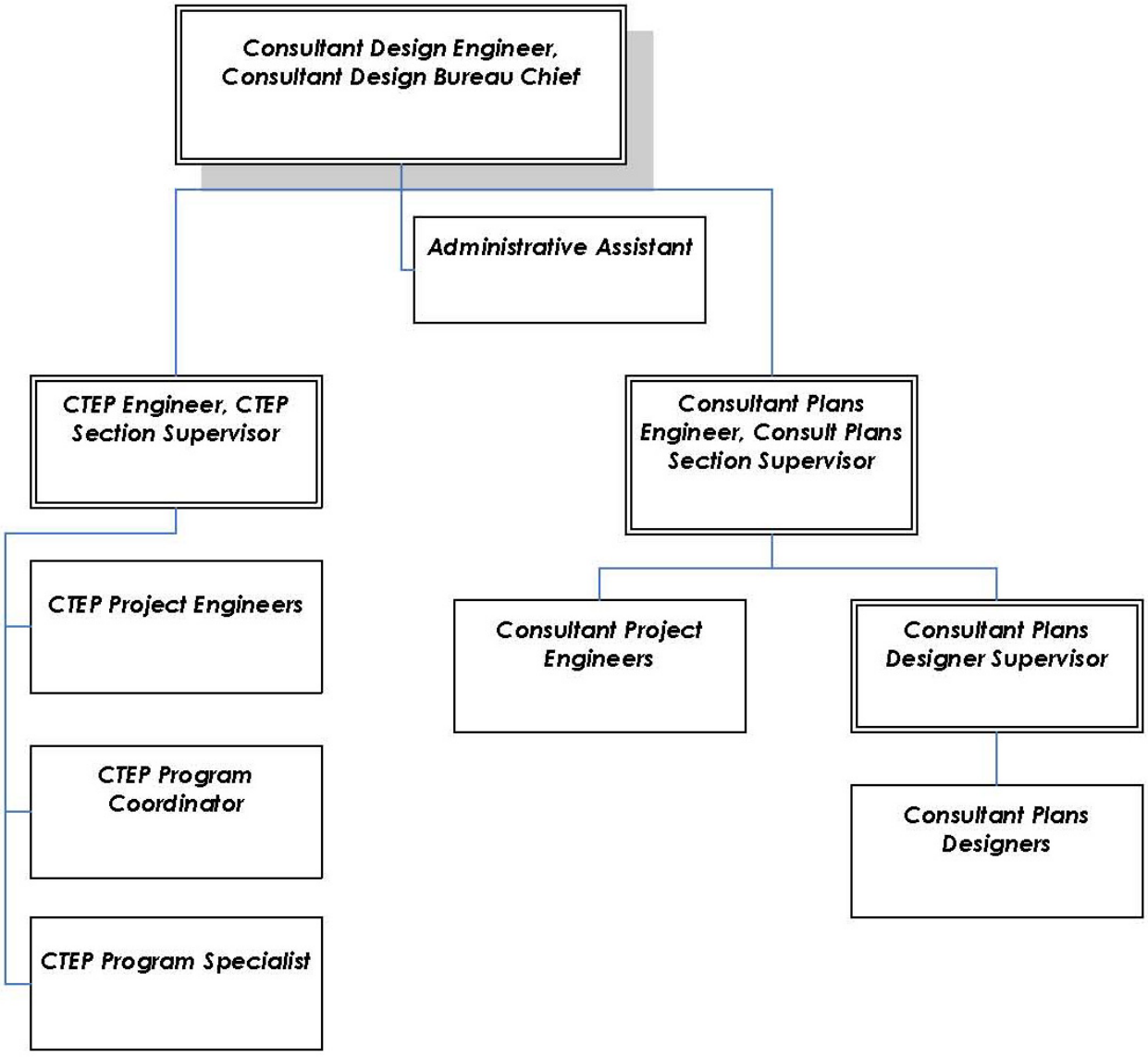

Figure 2.2-A — CONSULTANT DESIGN BUREAU ORGANIZATION

2.2.2 Consultant Design Engineer

The Consultant Design Engineer (CDE) has the overall responsibility for the MDT Consultant program and for the management of the Consultant Design Bureau. The following presents a summary of these responsibilities. The CDE:

- Establishes the policies, procedures and practices used by the Consultant Design Bureau in the administration of the MDT Consultant program.
- Coordinates with the MDT Consultant industry through participation with the Montana Chapter of the American Council of Engineering Companies (ACEC).
- Represents MDT on all issues related to the MDT Consultant program.
- Serves as the Bureau's official point of contact with the MDT Director's Office, FHWA, local governments and other entities outside of the Department.
- Initiates the process of securing Consultant services.
- Issues Requests for Qualifications (RFQs) and Requests for Proposals (RFPs) to the Consultant community.
- Selects the membership of the Rating Panel to evaluate Consultant Statements of Qualifications and Proposals.
- Serves as the Chairman of the Consultant Selection Board.
- Serves as the only authorized point of contact for interested Consultants during the solicitation and selection process (see Section 6.3).
- Determines which of the Consultant selection processes (e.g., Prequalification, Project-Specific, Hybrid) will be used (see Section 6.3).
- Notifies Consultants on the outcome of the Consultant selection process.
- Provides debriefings to Consultants, upon request, after completion of the Consultant selection process.
- Can authorize a Consultant to perform out-of-scope work while a contract amendment is being formally processed.
- Serves as non-voting chairman for the Audit Dispute Resolutions process.
- Serves as non-voting chairman for the Errors & Omissions process.

- In consultation with the Civil Rights Bureau, establishes any needed DBE requirements on each project using Consultant services.
- Provides administration and oversight of the MDT CTEP program.

2.2.3 Consultant Plans Section

2.2.3.1 Consultant Plans Engineer

The Consultant Plans Engineer is primarily responsible for the day-to-day administration of the Consultant Plans Section, which includes the Consultant Project Engineers and the Consultant Plans Checkers. The Consultant Plans Engineer is responsible for the delivery of Consultant-designed projects; reports directly to the Consultant Design Engineer; and is authorized to act on behalf of the CDE when necessary.

The following summarizes the responsibilities of the Consultant Plans Engineer:

- Assigns the Consultant Project Engineers to individual Consultant projects.
- Through interaction with the CPEs, monitors the status of all active Consultant projects.
- Attends any significant meetings with Consultants.
- Manages the day-to-day activities of the staff in the Consultant Plans Section.
- In coordination with the CPEs, works to resolve any issues and disputes with MDT functional units, external units, etc., that do not involve an interpretation of or a change in the policies of MDT or the Consultant Design Bureau.
- Signs project-related MDT memoranda and correspondence to Consultants.
- Upon request, answers any project-related or contract-related questions.
- Identifies and develops methods to improve efficiency and to streamline processes related to the delivery of Consultant projects.

2.2.3.2 Consultant Project Engineers

The Consultant Project Engineers (CPEs) are the focal point for the day-to-day administration and management of MDT Consultant projects. In general, the CPEs are responsible for their respective projects from initial scoping with the Consultant to construction completion. The CPEs develop contracts and amendments, provide engineering review of the project design, manage the project schedule, scope and budget, verify that the Consultant complies with all agreements, and ensures that sound engineering and design concepts are used per Federal, State and local requirements. The CPEs also perform a variety of other engineering and project

management duties as assigned by the Consultant Design Engineer and Consultant Plans Engineer. More specifically, the CPE:

- Works with the MDT functional unit to write and issue a project-specific Request for Proposals, when this solicitation process is used.
- Signs all routine project-related MDT memoranda.
- Assists the Consultant Design Engineer as needed in the administration of the solicitation process, including the development of RFPs and RFQs.
- Once a Consultant is selected, serves as the MDT Team Leader and schedules and leads the Scoping Meeting between MDT and the Consultant.
- Prepares an independent Cost Estimate and negotiates the scope, schedule and cost with the Consultant.
- Coordinates with EISS and other MDT units as needed for the MDT project scheduling system (OPX2) and budget system (PPMS).
- Coordinates with the various MDT units (e.g., Internal Audit, Legal Services) and the Consultant to execute the contract.
- On “Projects” and “Special Projects,” serves as the central point of contact for all administrative and technical activities during project implementation, including:
    + establishing the communication protocol among the involved parties;
    + processing monthly progress reports and invoices;
    + addressing contract issues (e.g., insurance, agreements with other entities, budget, scope);
    + preparing and negotiating contract amendments, and ensuring that a project completion date does not lapse while work remains to be done;
    + coordinating meetings between MDT and the Consultant as needed during project development;
    + provides broad engineering oversight in addition to technical guidance;
    + coordinating efforts to address any project-related problems, including errors and omissions on Consultant plans;
    + preparing Consultant performance evaluations with input, as needed, from other MDT units;

  + implementing project closure; and

  + ensuring that all necessary documents, files, etc., are incorporated into the various MDT records and files (e.g., MDT Document Management System, MDT Consultant Information Systems Database, master project file).

- For a "Term Contract," supports the MDT functional unit as needed to negotiate the scope and cost with the Consultant. The CPE serves as the central point of contact for all administrative activities during project implementation and provides guidance and administrative support as needed.

- If applicable, manages the Consultant contract when the Consultant is providing construction-related engineering services.

2.2.3.3 Consultant Plans Checking Unit

The Consultant Plans Checking Unit is responsible for reviewing Consultant plans prepared for MDT projects. The Unit's Checkers serves as a technical liaison between MDT and the Consultant. They review (at various levels of detail) all elements of the Consultant's plans, but focus their attention on the roadway design portion of the plans. The MDT Road Design Section does not typically review Consultant plans. As appropriate, for other design elements of the project, the Consultant Plans Checking Unit will coordinate with the MDT unit responsible for these elements to conduct a technical review of the Consultant plans. This could include the Hydraulics Section, Geotechnical Section, Bridge Bureau, etc.

In general, the nature of the evaluation by the Consultant Plans Checking Unit is a "technical review," not an "approval" that would then transfer the burden of responsibility for technical and engineering accuracy from the Consultant to MDT. The depth of this technical review will vary from project to project. However, the Consultant is required to respond to any written comments provided by the Consultants Plans Checkers on the Consultant plans.

For more discussion on the responsibilities of the Consultant Plans Checking Unit, see Section 3.1.3.1 and Section 8.1.2.2.

2.2.4 CTEP Section

Since 1991, each Federal transportation law enacted by Congress has required that 10% of the Federal transportation funds be set aside for transportation enhancement projects. These include projects for bicycle and pedestrian improvements, historical and archeological site enhancements, etc. The transportation enhancement funds are available to local and Tribal governments in Montana under the Community Transportation Enhancement Program (CTEP), which is administered by the CTEP Section. The *MDT CTEP Manual* discusses this Program in detail.

2.3 HIGHWAYS AND ENGINEERING DIVISION

In general, this Section applies to in-house projects.

2.3.1 General

The Highways and Engineering Division has the primary responsibility for the design and construction of the projects in the MDT capital improvement program. The Division performs the work in the Headquarters Office, as is predominantly true for the Preconstruction Program, and sets Department-wide policies and procedures for the operations of the MDT District Offices (e.g., for the Construction Program).

2.3.2 Highways and Engineering Division Administrator

The Administrator is in charge of the Highways and Engineering Division, which includes three major units:

- the Preconstruction Program, which advances capital projects from the planning stage to the initiation of construction;
- the Construction Program, which involves the construction of capital projects by private contractors; and
- Management Information and Support.

The Administrator reports directly to the Chief Operations Officer.

2.3.3 Preconstruction Program

2.3.3.1 Highways Bureau

The Highways Bureau is responsible for all engineering activities for in-house highway design projects. The Highways Bureau includes the following Sections:

1. Road Design Section. The Road Design Section is responsible for all MDT capital improvement projects for which the Section serves as the lead unit for project development. The functions of the Section include:
    - coordinating all activities necessary for the design of a roadway project (e.g., surveying, environmental evaluation, right-of-way, hydraulics, traffic engineering);
    - preparing the detailed roadway design plans, quantities, special provisions, etc., to prepare the project for advertisement;

- providing technical assistance to local jurisdictions on road design issues; and
- developing and promulgating MDT policies and procedures on road design issues (e.g., sidewalk warrants, roadside barrier end treatments, geometric design policies).

2. Hydraulics Section. The Hydraulics Section is responsible for the hydrologic and hydraulic analyses for roadway drainage appurtenances and bridge waterway openings. The Section's responsibilities include:

   - developing and promulgating MDT policies and procedures on hydraulics (e.g., hydrologic methods, culvert hydraulics, design of closed drainage systems);
   - evaluating proposed project features to be consistent with FEMA-adopted floodplain regulations;
   - providing technical assistance on hydraulics as needed to other MDT units and local jurisdictions; and
   - evaluating existing bridges for scour problems and recommending scour countermeasures for scour-critical structures.

3. Photogrammetry and Survey Section. The Photogrammetry and Survey Section, in combination with the District field survey crews, is responsible for all surveying needs required for the MDT's program of projects. The Section's responsibilities include:

   - developing and promulgating MDT policies and practices for surveying activities for both design and construction;
   - maintaining survey datums and coordinate systems for a base for all surveys in the State;
   - coordinating as necessary with the National Geodetic Survey; and
   - providing technical assistance on surveying as needed to other Department units and local jurisdictions.

2.3.3.2 Bridge Bureau

The Bridge Bureau is responsible for the design and operation of bridges and other structures on Montana's highway system. The Bureau provides input into the construction and maintenance of these structures. This applies fully to the State-maintained system and, to a lesser extent, the locally maintained systems. The Bridge Bureau includes the following Sections:

1. Bridge Design Section. The Bridge Design Section is responsible for all MDT capital improvement projects for new and rehabilitated bridges and other structures. The functions of the Section include:

   - coordinating all activities necessary for the design of a bridge project (e.g., surveying, environmental evaluation, right-of-way, hydraulics);
   - preparing the detailed bridge design plans, quantities, special provisions, etc., to prepare the project for advertisement;
   - providing technical assistance to local jurisdictions on bridge design issues; and
   - developing and promulgating MDT policies and procedures on bridge design issues (e.g., superstructure-type selection, loads, foundations).

2. Bridge Management Section. The Bridge Management Section is responsible for the operational programs administered by MDT for the State's inventory of bridges. This includes:

   - Bridge Management System (PONTIS), which prioritizes the replacement, rehabilitation and maintenance of the State's bridges;
   - National Bridge Inspection Standards (NBIS), which is a systematic program of periodic bridge inspections intended to detect structural problems to minimize the probability of a catastrophic structural failure;
   - the coordination for and conduct of bridge inspections;
   - the review and approval of all requests for permits to exceed the legal load over structures; and
   - the review of existing bridges for seismic vulnerability.

2.3.3.3 Right-of-Way Bureau

The Right-of-Way Bureau is responsible for designing right-of-way, acquiring land for highway facilities, managing acquired land, and providing assistance and payments to individuals, businesses and utilities that are relocated as a result of highway construction. Right-of-way operations are partially decentralized. The administrative organization and all functional sections are located in the Department's Headquarters in Helena. Field right-of-way operations are performed by personnel working in the Right-of-Way units of the five District Offices. The Right-of-Way Bureau includes the following Sections:

1. Appraisal Section. The Appraisal Section is responsible for the valuation of interests in real property to be acquired by the MDT. It is responsible for developing appraisal polices, procedures and special instructions; arranging for services of Consultant (fee)

appraisers when needed; reviewing all appraisals prepared for the Department; making determinations for the compensation the Department should offer to pay for each parcel of real property to be acquired; and assisting Department legal services and/or testifying in court in support thereof.

2. Acquisition Section. The Acquisition Section is responsible for the acquisition of real property for MDT and for providing relocation assistance to individuals who are displaced by MDT projects. In addition, this Section provides coordination among other organizational units of the Right-of-Way Bureau, MDT and FHWA in matters concerning right-of-way negotiations.

3. Design/Plans Section. The Design/Plans Section is responsible for the design of right-of-way plans. This Section prepares legal descriptions, deeds and exhibits required for right-of-way acquisitions. The Section provides policies and procedures for design of right-of-way plans, both MDT and Consultant; provides quality assurance for design criteria on MDT and Consultant plans; and makes all revisions to the *MDT Right-of-Way Design Manual*. The Section develops all right-of-way programming and modification requests from cost estimates prepared by the District or a Consultant.

4. Real Estate Services Section. The Real Estate Services Section is responsible for administering MDT's Property Management Program, which includes encroachment control, clearing the right-of-way of acquired improvements, implementing land exchanges, excess land sales and auctions, discharge of easements and abandonments, perfecting ownership records of land titles on State-owned property, and collecting and maintaining records of rents and accounts receivable. The Section also manages the Land Records Management Program, which ensures proper management of and safeguards for MDT's public and private records, and the Audit and Compliance Review Program, which consists of internal audits to ensure conformity with State and Federal laws and regulations, accounting rules and MDT policies.

5. Outdoor Advertising Unit. The Outdoor Advertising Unit is responsible for controlling outdoor advertising, including monitoring, record maintenance and enforcement.

6. Access Management Section. The Access Management Section is responsible for the development and administration of the MDT Access Management Program to ensure the effective, efficient and legal administration of program operations and activities. The Section conducts access management studies needed to plan and develop access control projects.

7. Utilities Section. The Utilities Section is responsible for obtaining cost estimates and securing agreements with utility and railroad companies for the relocation and adjustment of their facilities, as required for highway construction.

2.3.3.4 Traffic and Safety Bureau

The Traffic and Safety Bureau is responsible for all MDT traffic engineering activities and for the MDT highway safety programs. The Bureau includes the following Sections:

1. Traffic Engineering Section. The Traffic Engineering Section is responsible for:

   - traditional traffic engineering activities (e.g., signals, signing, speed studies);
   - selected geometric design elements (e.g., intersections, interchanges); and
   - detailed design of safety improvement projects.

2. Safety Management Section. The Safety Management Section is responsible for the following MDT safety programs:

   - Safety Improvement Program, which prioritizes safety improvement projects to optimize the safety benefits from the available funds;

   - Crash Surveillance System, which identifies correlations between crash characteristics at a specific site or along a highway segment compared to Statewide trends; and

   - Safety Management System, which is a multi-disciplinary team approach intended to reduce the number and severity of traffic crashes.

3. Rail/Highway Safety Section. The Rail/Highway Safety Section identifies and determines appropriate safety improvements to public highway-rail grade crossings to reduce the number of train/vehicle collisions across the State.

2.3.3.5 Engineering Information Services Section

The Engineering Information Services Section (EISS) provides support to the Bureaus within the Preconstruction Program. This includes the following:

1. CADD. EISS maintains, administers and provides training and support for the Department's Computer-Aided Design and Drafting (CADD) system.

2. Management Systems. EISS maintains, administers and provides training and support for the Department's Project Management System (i.e., OPX2) and Document Management Systems.

3. 3D Graphics. EISS develops and maintains three-dimensional visualization documentations and animations.

4. Engineering Costs. EISS provides, monitors and reviews preliminary engineering costs for Federal-aid projects.

2.3.4 Construction Program

2.3.4.1 Materials Bureau

The Materials Bureau is responsible for ensuring the quality of all materials, through testing and certification, incorporated into the State highway system. The Bureau includes the following Sections:

1. Physical Test Section. The Physical Test Section is responsible for the laboratory testing of all materials, either through providing guidance to the District labs or performing the testing in Headquarters. The Section also provides quality control and certification for all materials used on MDT projects.

2. Geotechnical Section. The Geotechnical Section is responsible for all subsurface investigations required for in-house Department projects (e.g., for bridge foundations, earth slope stability), performs the geotechnical design of earth and rock slopes and bridge foundations (in coordination with the Bridge Bureau), and designs earth-retaining structures.

3. Pavement Analysis Section. The Pavement Analysis Section determines the pavement design for MDT projects. The Section also operates the MDT Pavement Management System, which is intended to optimize funds for the preservation and improvement of pavement structures on the State highway system.

2.3.4.2 Contract Plans Bureau

The Contract Plans Bureau lets to contract all highway projects in Montana. The Bureau:

- completes final engineering documents, plans, specifications and estimates;
- advertises, amends, lets to contract and recommends award of contracts; and
- distributes detailed drawings, standard road and bridge specifications, etc.

2.3.4.3 Construction Administration Services Bureau

The Construction Administration Services Bureau is responsible for planning and administering construction program operations, contract administration activities, and final change order approval, including:

- developing and implementing new construction specifications, standards and methods;

- directing the development and administration of construction and contract administration computer programs and automated systems;

- managing the Department's general construction staffing and equipment budgets; and

- revising, maintaining and updating the automated systems (e.g., SiteManager) that support the Construction Program.

2.3.4.4 Construction Engineering Services Bureau

The Construction Engineering Services Bureau is responsible for:

- issuing direction on technical construction issues;
- general construction issue resolution;
- construction oversight and uniformity;
- implementation and follow-up of constructibility and post-construction review findings;
- value engineering proposal investigation and recommendations;
- technical expertise on construction processes, techniques and issues;
- overseeing the MDT construction claim process;
- review of construction plans, special provisions and procedures;
- review, develop, implement and analyze new construction products and procedures;
- value analysis studies;
- MDT design-build program; and
- performing project field reviews, oversight, contract administration and technical assistance.

2.3.5 Management Information and Support

Management Information and Support provides a variety of support functions and services to the Division Administrator, Preconstruction Program and Construction Program. These include:

- Fiscal Officer,
- Management Analyst,
- Human Resources Specialist,
- Training and Development Specialist, and
- Research.

2.4 UNITS OUTSIDE ENGINEERING DIVISION

2.4.1 Transportation Commission

The Transportation Commission is a quasi-judicial board consisting of five members, each of whom is appointed by the Governor for a four-year term. The Commission's major duties are as follows:

- selection/prioritization of projects for construction, maintenance, etc.;
- award of monthly contracts;
- allocation of Federal-aid highway funds;
- designation of highways by system;
- designation of special speed zones and maximum speeds on bridges and overpasses;
- designation of access control highways or facilities;
- resolution of outdoor advertising appeals; and
- abandonment of highway right-of-way.

2.4.2 Executive Management Team

The Executive Management Team coordinates upper level administrative and management activities; supports the Director in planning, budgeting, administrative management, policy development, personnel management, communications management and coordination; and provides leadership and direction for activities of the Department.

2.4.2.1 Director/Deputy Director

The Director is appointed by the Governor to lead the Montana Department of Transportation. The primary responsibility of the Director is to set statewide transportation policy for MDT and be responsible for all activities and services of the Department. The Deputy Director serves as the principal advisor to the Director and provides leadership and overall policy direction to MDT.

2.4.2.2 Chief Operations Officer

The Chief Operations Officer, who reports to the Director/Deputy Director, supervises the following MDT units:

- all District Offices,
- Highways and Engineering Division,
- Maintenance Division, and
- Motor Carrier Services Division.

2.4.2.3 Chief Administrative Officer

The Chief Administrative Officer, who reports to the Director/Deputy Director, supervises the following MDT units:

- Information Services Division,
- Administration Division,
- Aeronautics Division,*
- Business Process Solutions Unit, and
- Rail, Transit and Planning Division.

**The Director supervises the Aeronautics Division in coordination with the Chief Administrative Officer.*

2.4.2.4 Chief Human Resources Officer

The Chief Human Resources Officer, in coordination with the Director, supervises the following MDT units:

- Human Resources Division, and
- Internal Audit Unit.

2.4.3 Internal Audit Unit

The Internal Audit Unit provides and maintains an effective and professional internal and external audit function for MDT. The Unit administers a comprehensive program of audits and investigations to ensure conformity with laws, regulations and Departmental policies. The duties of the Internal Audit Unit are divided into the following types of work:

- Financial Compliance Audits;
- Performance Audits;
- Electronic Data Processing Audits;
- Compliance Audits of Motor Fuels Tax, International Fuel Tax Licensees and International Motor Carrier Registration Licensees;
- special investigations (fraud/illegal activity);
- monitoring of private sector contracts for audit services;
- supervision of independent auditors under contract with the agency; and

- assisting with special projects to include tests for illegal use of dyed or blended motor fuels.

Chapter 11 of the *MDT Consultant Services Manual* discusses the responsibilities and authority of the Internal Audit Unit specifically for the MDT Consultant Program (e.g., indirect cost rate audits).

2.4.4 Legal Services Unit

The Legal Services Unit, which reports to the Director/Deputy Director, is responsible for:

- representing MDT in litigation in trials and hearings before administrative boards, arbitrators and State, Federal and appellate courts;
- drafting, reviewing and, as appropriate, providing testimony on legislation and rules and policies;
- reviewing proposed contracts and other agreements;
- representing MDT in claims and litigation involving its contracts;
- coordinating and negotiating with Montana's seven Tribal governments in all matters involving MDT projects or actions within the boundaries of Montana's Reservations;
- providing legal advice to the Director and MDT managers;
- assuring MDT compliance with the administrative, State and Federal constitutions, laws, rules and regulations; and
- reviewing environmental documents and representing MDT in environmental litigation.

2.4.5 Tribal Liaison

The MDT Tribal Liaison functions are coordinated through the Director. They include coordinating with tribal attorneys, tribal chair persons, Tribal Employment Rights Officers (TEROs) and tribal planners regarding MDT projects that impact tribal governments.

2.4.6 Human Resources Division

The primary goals and objectives of the Human Resources Division (HRD) are to:

- introduce and develop a culture that considers the workforce in every business decision made in the agency;

- create services and programs that actively provide for and measure organizational performance;
- integrate and deliver internal and external HR services with maximum flexibility, adaptability and efficiency; and
- provide for compliance and governance oversight that actively manages and mitigates workforce-related risks, including internal controls, ethics and key leadership succession planning.

Additionally, the Division is committed to protecting the civil rights of MDT employees and applicants for employment, eliminating unlawful discrimination on the basis of protected class and ensuring that all beneficiaries and potential beneficiaries of MDT programs are offered an equal participation opportunity.

The Human Resources Division includes four units:

- Civil Rights Bureau,
- Office of Occupational Health and Safety,
- Operations Bureau, and
- Workforce Planning Bureau.

2.4.7 Public Information Office

The Public Information Office, which reports to the Director/Deputy Director, works to increase public awareness of MDT activities. The Public Information Officer acts as the Director's spokesperson and coordinates marketing activities, manages media contacts, writes speeches and press releases, and assists staff with media issues.

2.4.8 District Offices

MDT maintains five District Offices based on geographic areas in the cities of Missoula, Butte, Great Falls, Glendive and Billings. The basic function of each District Office is to provide the necessary field services for MDT activities within its geographic boundaries. Some of the District responsibilities include:

- maintaining the State highway system (e.g., snow removal, pavement maintenance);
- providing construction inspection for MDT construction projects;
- nominating projects for capital improvements and identifying the Project Scope of Work;
- inspecting bridges as part of NBIS;
- designing selected projects;

- reviewing and approving requests for private access onto the State highway system;
- serving as liaison between the local governments and the Headquarters Office;
- performing field surveys;
- assisting with the conduct of public hearings and public information meetings;
- providing unit prices to assist in the preparation of construction cost estimates and, in some cases, determining the total project cost estimate;
- reviewing and commenting on the proposed traffic control plan during construction and, in some cases, developing the traffic control plan for direct insertion into the final plan assembly; and
- responding to public inquiries.

2.4.9 Administration Division

The Administration Division provides support services for MDT, which includes accounting, financial management, purchasing and mail services. The Division includes the following Bureaus and Units:

- Accounting Controls Bureau,
- Fiscal Operation Bureau,
- Office Management Unit,
- Budget and Planning Bureau,
- Fuel Tax Management and Analysis Bureau, and
- Purchasing/Mailroom Bureau.

2.4.10 Information Services Division

The Information Services Division assists MDT customers with their Information Technology (IT) needs, which enables them to conduct their business as efficiently and effectively as possible.

2.4.11 Maintenance Division

The Maintenance Division is responsible for:

- the Maintenance, Equipment and Motor Pool programs;
- all State-maintained roadways;
- State Motor Pool and equipment;
- all MDT facilities; and
- a Statewide communications system.

The primary function of the Maintenance program is to maintain State roadways for the safety of the traveling public and to prevent the roadway from wearing out prematurely. Maintenance activities include pothole repair, crack filling, patching, blading of gravel shoulders and roadways, clearing drainage ditches and pipes of debris, vegetation control, sign replacement, roadway striping, guardrail maintenance, upkeep of rest areas and winter roadway maintenance.

2.4.12 Rail, Transit and Planning Division

The Rail, Transit and Planning Division is responsible for the development and implementation of the processes, systems and planning programs necessary for informed programming decisions for the MDT program of transportation projects.

2.4.12.1 Environmental Services Bureau

The Environmental Services Bureau is responsible for all activities related to MDT compliance with environmental laws, regulations, policies, etc., and the Bureau ensures that the proper environmental documents and permits are in place for all projects. The Bureau includes the following Sections:

1. Engineering Section. The Engineering Section works with the lead unit in project development to ensure that the project complies with Federal, State and Tribal environmental laws and regulations. The Section's responsibilities include:

    - determining the appropriate level of environmental document under the National and Montana Environmental Policy Acts (NEPA/MEPA), including project environmental classification (i.e., categorical exclusion, environmental assessment or environmental impact statement);

    - determining the need for early coordination with other State, Federal and Tribal agencies;

    - coordinating with the lead unit in the identification and evaluation of project alternatives;

    - preparing and/or reviewing categorical exclusions, environmental documents, Section 4(f) determinations and Section 6(f) Statements;

    - coordinating with the applicable State, Federal and Tribal agencies to secure the project permits/approvals (e.g., Section 404 *Clean Water Act*, ALPOs, ALCOs); and

    - determining MDT compliance with the public involvement process.

2. Resources Section. The Resources Section is responsible for identifying all environmental resources within the proposed project limits, in coordination with the Engineering Section, for evaluating the potential project impacts on these resources. Resources include biological (e.g., wetlands, fish habitat), historical, archaeological and socio-economic resources. The Resources Section also coordinates with the applicable State, Federal and Tribal agencies to secure the project permit/approvals for the Section 124 *Stream Preservation Act*.

3. Hazardous Waste Section. The Hazardous Waste Section is responsible for identifying and evaluating various potential project impacts, including:

   - air quality,
   - noise impacts, and
   - hazardous waste sites.

2.4.12.2 Other Bureaus

In addition to Environmental Services, the Rail, Transit and Planning Division includes the following Bureaus:

1. Program and Policy Analysis Bureau. This Bureau provides support to MDT on national policy issues and oversees MDT involvement for the Systems Impact Analysis Process.

2. Multimodal Planning Bureau. In cooperation with the public, representatives of stakeholder groups and local, tribal, Federal and State officials, the Multimodal Planning Bureau develops and implements the transportation programs, processes, systems and planning products necessary to make informed policy and programming decisions. The Bureau works with the Metropolitan Planning Organizations (MPOs) in Montana:

   - Billings,
   - Missoula, and
   - Great Falls.

3. Data and Statistics Bureau. The Data and Statistics Bureau collects, processes, analyzes and stores data and manages information systems for Montana's transportation infrastructure.

4. Project Analysis Bureau. The Project Analysis Bureau is responsible for establishing Montana's Statewide transportation plan, and setting a direction for how its transportation system will be managed and developed into the future. The Bureau is also responsible for preparing the Statewide Transportation Improvement Program (STIP), which identifies all transportation-related capital and operating projects Montana expects to implement or construct each fiscal year.

5. State Highway Traffic Safety Bureau. This Bureau works to reduce the losses from traffic crashes through a series of programs designed to assist in developing countermeasures for known problem areas.

2.4.13 Aeronautics Division

The Aeronautics Division has two Bureaus: Airports and Airways Bureau, and Safety and Education Bureau. The Division is responsible for fostering and promoting aviation in the State of Montana. Among it's many duties, the Division facilitates and inspects public and private airports, owns and operates 15 State-owned airports, provides aviation charts and directories, operates a surplus property and resale program, owns and operates navigation aids for flying, registers pilots and aircraft, provides various educational programs, and acts as liaison for all aviation matters with various local, State and Federal agencies.

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Chapter 3
COORDINATION

The administration and management of the MDT Consultant program requires coordination with many other internal MDT units and entities external to MDT. The necessary coordination can be segregated into three basic categories:

- The Consultant Design Bureau (Bureau) will coordinate with MDT units that are users of Consultant services.
- The Bureau will coordinate with MDT units that provide technical support services required to administer and manage the MDT Consultant program.
- The Bureau will coordinate with entities external to MDT for a variety of reasons.

Chapter 3 discusses the coordination between the Consultant Design Bureau and others. See Section 8.1.1.3 for a discussion on the communication protocol for Consultant projects.

3.1 MDT UNITS

3.1.1 Executive Level Involvement

3.1.1.1 Director/Deputy Director

The involvement of the Director or Deputy Director in the MDT Consultant program includes:

- serving as a permanent Voting Member of the Consultant Selection Board; and
- providing overall policy and program direction.

3.1.1.2 Chief Operations Officer

The involvement of the Chief Operations Officer in the MDT Consultant program includes:

- serving as a permanent Voting Member of the Consultant Selection Board; and
- executing all Agreements (or Amendments) with Consultants.

3.1.1.3 Highways and Engineering Division Administrator

The involvement of the Division Administrator in the MDT Consultant program includes serving as a permanent Voting Member of the Consultant Selection Board.

3.1.1.4 Preconstruction Engineer

The involvement of the Preconstruction Engineer in the MDT Consultant program includes:

- providing approval at the conclusion of negotiations via the Contract Funding Approval Memo,
- serving as a permanent Voting Member of the Consultant Selection Board, and
- providing overall managerial support for the Consultant program.

3.1.2 Users of Consultant Services

3.1.2.1 General

The following MDT units, many of which are in the Engineering Division, may use Consultant services:

- Highways Bureau;
- Bridge Bureau;
- Right-of-Way Bureau;
- Environmental Services Bureau;
- Traffic and Safety Bureau;
- Geotechnical Section;
- Bureaus within the Construction Program;
- Rail, Transit and Planning Division;
- Aeronautics Division;
- Districts; and
- others as necessary.

Chapter 2 briefly discusses the functions and responsibilities of the above MDT units.

3.1.2.2 Coordination Activities

The coordination between the Consultant Design Bureau and the MDT units that use Consultant services varies somewhat. Two factors that affect the coordination are:

- the nature of the consultant service, and
- the type of Consultant contract (e.g., Project, Term, Special Project).

The following generic discussion summarizes the basic coordination with the MDT units on Consultant projects. This discussion is only intended to discuss the overall roles of the Consultant Design Bureau and the functional unit; the referenced Chapters provide detailed information on the respective responsibilities, participation and activities performed by the

Bureau and the functional unit. Also note that the following discussion distinguishes between a "Project" and a "Term Contract." For a "Special Project," the respective roles are similar to a "Project."

The basic coordination between the Consultant Design Bureau and a user of Consultant services follows:

1. Consultant Need (Project). Any MDT Unit or District Administrator identifies the need to hire a Consultant using the "Project" procedures as discussed in Section 6.2.1. The Consultant Design Bureau will initiate the Consultant selection process.

2. Consultant Need (Term Contract). For an in-house project, the MDT technical support units (e.g., Geotechnical Section, Hydraulics Section, Right-of-Way Bureau, Bridge Bureau, Environmental Services Bureau) may identify the need to secure Consultant services using the "Term Contract" procedures as discussed in Section 6.2.2. The Consultant Design Bureau will initiate the Consultant selection process.

3. Consultant Selection. Chapter 6 discusses the process for Consultant selection in detail. For both a Project and a Term Contract, the Consultant Design Bureau and the MDT unit participate in the selection process. The contribution by the functional unit includes membership on the Rating Panel and, where applicable, preparing the scope of services for the solicitation.

4. Contract Negotiations. Chapter 7 discusses this in detail. For Projects, the Consultant Project Engineer (CPE) leads the negotiation process supported as needed by the functional unit. For Term Contracts, the CPE executes the contract with support as needed from the functional unit. For Term Assignments under the Term Contract, the functional unit leads the negotiation process supported as needed by the CPE.

5. Contract Amendments. Section 8.3.6 discusses Contract Amendments. For Projects, the Consultant Project Engineer (CPE) leads the negotiation process supported as needed by the functional unit. For amendments to Term Contracts, the CPE leads the process to execute the amendments. For amendments to Term Assignments, the functional unit leads the process to execute the amendments to Term Assignments.

6. Consultant Project Administration. Chapter 8 discusses this in detail. For Projects, the CPE has the primary responsibility for project administration. The role of the functional unit is to answer technical questions and to perform a technical review of the Consultant deliverables; however, all communication is through the CPE.

   For Term Contracts, the functional unit takes the lead on all technical issues and is the primary point of contact. The CPE assists the Functional Manager with all contract issues (e.g., invoices, time extensions).

3.1.3 Support Services

This Section discusses the coordination between the Consultant Design Bureau and those MDT units that provide support services for the administration of the MDT Consultant Program.

3.1.3.1 Technical Support

As stated in Section 6.2.1, the Preliminary Field Review Report may identify the need to secure Consultant services using the "Project" procedures. Typically, the Consultant's scope of services will include all aspects of the project similar to a MDT-designed project (e.g., structures, hydraulics, geotechnical, pavement). Applicable MDT functional units provide technical support services to the Consultant Design Bureau to review Consultant project deliverables. Therefore, when a Consultant submits a project deliverable (reports, plans, etc.) to the Bureau, the CPE or Consultant Plans Checker will forward the Consultant deliverable to the applicable MDT functional unit for review and comment.

The Consultant Plans Checker and functional units are responsible for providing comprehensive technical reviews of Consultant plans prepared for MDT projects. The CPE has the responsibility of ensuring that these tasks are completed. The primary focus of the review is to:

- analyze Consultant plans for accuracy and completeness and to ensure compliance with applicable Federal, State and local standards;
- ensure that designs provide a safe and cost-effective design that is constructible, biddable and accurate;
- ensure effective incorporation of all aspects of highway engineering (e.g., right-of-way, environmental, hydraulics); and
- ensure that the CADD files are compiled according to MDT standards and have been properly incorporated into the MDT Document Management System.

The Consultant Plans Checker submits the final plans to the Contract Plans Bureau and the CPE, and the Consultant Plans Checker facilitates all changes directly with the Consultant and other MDT units as necessary.

Section 8.1.2.2 discusses procedures for the technical review of Consultant submittals.

In most cases, for a Consultant-designed project, MDT will be responsible for certain project activities. The scope of services will clearly delineate any MDT responsibilities. Typical examples include:

- MDT will typically secure any necessary agreements (e.g., utilities, railroad, Tribal, city/county).

- MDT will typically secure any necessary right-of-way and any right-of-way agreements and easements.

- Based on the information provided by the Consultant, MDT will typically secure any necessary environmental permits/certifications/approvals (e.g., Section 404, SPA).

3.1.3.2 Internal Audit Unit

The Internal Audit Unit has a significant involvement in the MDT Consultant program. The *MDT Consultant Services Manual* documents the Unit's role in detail in:

- Chapter 7 "Contract Negotiations," and
- Chapter 11 "Accounting and Auditing."

The following briefly summarizes the key activities of the Internal Audit Unit:

- providing a resource and guidance for acceptable accounting standards and Federal and State laws and regulations that Consultants must meet;

- reviewing indirect cost rate calculations for audits for individual MDT Consultants and providing its recommendation;

- reviewing the Consultant's accounting system;

- providing guidance on the *Federal Acquisitions Regulations* (FAR);

- reviewing cost proposals for compliance with MDT policies and practices (as requested);

- reviewing proposals for amendments for compliance with the terms of the original agreement (as requested);

- performing various types of audits (e.g., post-award audit, interim audit, final audit, desk review); and

- participating in the Consultant Audit Resolution Process.

3.1.3.3 Legal Services Unit

For the MDT Consultant program, the primary responsibility of the Legal Services Unit is to review proposed contracts with Consultants, develop standardized language for MDT Consultant contracts and provide general legal guidance.

The Legal Services Unit works jointly with the Consultant Design Engineer and the Montana Chapter of ACEC to develop the standard MDT contract language, which must meet all applicable State and Federal laws and regulations. See Chapter 12. The Unit also provides

legal interpretations of contract clauses and takes the lead for any legal action resulting from a Consultant project.

3.1.3.4 District Offices

All communication between the District and Consultant must be through the CPE unless authorized otherwise by the CPE. See Sections 8.1 and 8.2.

In general, the Consultant Design Bureau will inform the District Administrator of any significant activities related to a Consultant project in that District. More specifically, the District Office will be invited to all field reviews and will receive project-related correspondence. Also, the District Office participates in the Design Coordination Meetings, which are attended by the Consultant Project Engineer.

The District Administrator may be involved in the process to identify the need to secure Consultant services for a proposed project. The applicable District Administrator is also an ad-hoc Voting Member of the Consultant Selection Board.

The District Construction Engineer will notify the Consultant Design Bureau if the contract between a design Consultant and MDT needs to be modified for the Consultant to provide construction support services. The District Construction Engineer is also involved in construction problems related to errors or omissions in Consultant plans.

3.1.3.5 Construction Program

The Bureaus within the Construction Program will coordinate with the Consultant Design Bureau for the following:

- providing feedback to the Consultant Design Bureau on the evaluation of the design Consultant after construction is completed;
- working with the Consultant Design Bureau to resolve construction problems related to errors or omissions in Consultant plans;
- working with the Bureau and Consultant if Value Analysis is applicable to a Consultant-designed project; and
- reviewing plans and specifications (similar to other Functional Managers).

3.1.3.6 Public Information Office

Occasionally, the Consultant Design Bureau may be required to interact with the media or the public. The Bureau will work with the Public Information Office when necessary for this interaction.

3.1.3.7 Administration Division

The Consultant Design Bureau requires support services to administer its operations (e.g., purchasing, office equipment, mail). The Administration Division provides these services.

3.1.3.8 Engineering Information Services Section

The Engineering Information Services Section (EISS) is responsible for the MDT project management system (OPX2). See Section 4.1.1 for the Consultant Design Bureau's interaction with EISS on OPX2.

3.1.3.9 Management Information and Support

The CPE coordinates with the Fiscal Officer within Management Information and Support for:

- invoicing,
- payments to Consultants, and
- other issues.

3.1.3.10 Information Services Division

The Information Services Division maintains and supports the MDT Document Management System and Consultant Information System Database. As needed, the Consultant Design Bureau coordinates with the Division when using the DMS and CIS.

3.2 EXTERNAL UNITS

This Section discusses the specific coordination activities between the Consultant Design Bureau and units external to MDT for which the Bureau has significant interaction. In general, the Bureau has the authority to communicate directly with any of these external units or to delegate this authority to the applicable MDT unit. An exception is with Tribal governments; see Section 3.2.3. Unless directed otherwise, the Consultant must coordinate through the Consultant Project Engineer when communicating with these external units.

3.2.1 Federal Highway Administration

3.2.1.1 General

The Federal Highway Administration (FHWA) administers the Federal-aid program that funds eligible highway improvements nationwide. Their basic responsibility is to ensure that the State DOTs and all other recipients of Federal-aid comply with all applicable Federal laws and regulations in their expenditure of Federal funds and to ensure that the State DOTs meet the applicable engineering requirements for their proposed highway projects. FHWA maintains a Division Office within each State, and this is the primary point of contact for a State DOT.

In general, FHWA will implement the following actions (and perform additional actions as needed):

- programming Federal-aid funds for all Federal-aid projects (PE, ROW, Construction);
- reviewing all right-of-way programs;
- approving the MDT Indirect Cost Allocation Plan;
- approving all environmental documents for all Federal-aid projects;
- approving civil rights and DBE programs;
- processing Federal-aid project final vouchers; and
- approving the Statewide Transportation Improvement Program (STIP).

3.2.1.2 Partnership Agreement

FHWA and MDT have entered into a Partnership Agreement which, among many other objectives, establishes the policies and procedures that MDT must follow to secure Federal-aid funding in its administration of the MDT Consultant program. The Partnership Agreement establishes a general framework for cooperation between MDT and FHWA. The Agreement:

- outlines the respective roles, responsibilities and authorities of MDT and FHWA for the Federal-aid Highway Program (FAHP);

- identifies the controlling documents via its reference to the “Montana Delegated Program and Project Responsibilities and Control Documents Reference Guide”;

- documents FHWA project-level oversight on Federal-aid projects;
- documents FHWA program-level oversight for the FAHP in Montana; and
- identifies the MDT and FHWA performance goals and results for the FAHP in Montana.

3.2.1.3 Other

The FHWA involvement in the MDT Consultant program also includes the following:

1. CDB Documents. As part of its administration and management operations, the Consultant Design Bureau produces standardized documents including the *MDT Consultant Services Manual*. FHWA reviews and approves the *Consultant Services Manual*.

2. Consultant Selection. FHWA, although it is not a member and does not have a vote, is invited to the meetings of the Consultant Selection Board. FHWA provides guidance on issues related to the Federal-aid program.

3. Special Activities. On a case-by-case basis, FHWA may encourage or mandate that MDT pursue special activities related to the MDT Consultant program. For example, the use of a Project Quality Plan on specific projects (see Chapter 9) was based in part on FHWA involvement.

3.2.2 Local Coordination

3.2.2.1 General

MDT has a responsibility to ensure that the cities, counties, media, Tribal governments and general public remain up-to-date on all MDT projects in their locality. For a Consultant project, the CPE may delegate the authority to the Consultant to coordinate directly with local governments. Although the Consultant Design Bureau may communicate directly with the local government agencies, the MDT communication is better accomplished through the District Administrator or Public Relations Officer.

3.2.2.2 Local Consultant Projects

Occasionally, a local agency will serve as the lead for the administration of a Consultant project that is funded with State and/or Federal funds. In this case, a Consultant Project Engineer (CPE) will be assigned to the project. The city, county or Tribe must follow all MDT/FHWA policies and procedures related to the administration of a Consultant project. This refers to:

- Consultant selection (Chapter 6),
- Consultant negotiations (Chapter 7),

- project administration (Chapter 8), and
- indirect cost rate audits (Chapter 11).

The local agency must consistently coordinate with the CPE throughout project implementation. In particular, the Consultant Design Engineer must review and process for approval:

- the Consultant selection process;
- the Consultant contract before execution; and
- all contract amendments.

Chapter 12 of the *MDT Local Agency Guidelines* documents the responsibilities and requirements for local agencies that use Consultant services using Federal and/or State funds.

3.2.2.3 Local Working Groups

For large, complicated or controversial projects that are using Consultant services, the Consultant Design Bureau may coordinate with a Local Working Group or Citizen's Advisory Committee during project implementation. MDT and the Consultant will meet on-site with the Group or Committee periodically (e.g., monthly, quarterly). MDT and the Consultant will update the local government agencies on the project status and seek information, advice, etc., from the Group/Committee.

3.2.2.4 Agreements

Section 4.7 lists several agreements that may be required with Tribal governments, cities and/or counties on a MDT project. For Consultant projects, other MDT units are responsible for their processing; however, the Consultant Project Engineer must ensure that these agreements are executed.

3.2.3 Tribal Governments/Bureau of Indian Affairs

MDT coordination with the Tribal governments and/or the Bureau of Indian Affairs (BIA) will be necessary for Consultant projects that are on or in the vicinity of Tribal lands. MDT maintains Memorandums of Understanding (MOU) with the Tribal governments throughout the State that outline the government-to-government relationship, including the planning, design and construction processes for each reservation. Each construction project also requires a Project Specific Agreement (PSA) that may outline training positions, mineral and water sources or other items not included in the MOU.

The Consultant Design Bureau is not authorized to contact the head of a Tribal Council directly; the MDT Director is the only authorized point of contact, unless that Office delegates the authority elsewhere. Through the Director's Office, MDT will keep the Tribal governments

informed on the project progress and will work with the Tribal governments on negotiating MOUs, PSAs and/or TEROs (Tribal Employment Rights Office) Agreements.

3.2.4 Resource Agencies

Project development often requires coordination with one or more State and Federal resource agencies. These may include:

- Montana Department of Natural Resources and Conservation (DNRC)
- Montana Department of Fish, Wildlife and Parks (FWP)
- Montana Department of Environmental Quality (DEQ)
- Montana State Historic Preservation Office (SHPO)
- Montana Natural Heritage Program (MNHP)
- United States Forest Service (USFS)
- US Environmental Protection Agency (EPA)
- National Park Service (NPS)
- Bureau of Land Management (BLM)
- Bureau of Reclamation (BOR)
- United States Fish and Wildlife Service (USFWS)
- United States Army Corps of Engineers (COE)
- US Geological Survey (USGS)
- Natural Resource Conservation Service (NRCS)

For Consultant projects where coordination with resource agencies is necessary, the chain of command is as follows: From the Consultant to the MDT Consultant Project Engineer to the MDT Environmental Services Bureau to the resource agency. When the resource agency provides comments on environmental documents, plans, permit applications, etc., the chain of command is reversed. The chain of command can be modified at the discretion of the CPE.

3.2.5 Utility Companies

The MDT Utilities Section is the primary point of contact with the Utility Companies that operate in Montana. However, the Utilities Section has delegated the authority to the CPE to perform many day-to-day routine tasks (e.g., setting up meetings between the Utility and MDT/Consultant). However, only the Utilities Section can address major policy and legal issues (e.g., negotiating cost reimbursements, executing agreements between MDT and the Utility Company).

3.2.6 American Council of Engineering Companies

MDT recognizes the importance of communication and collaboration with the Consultant community that provides professional services to MDT. This community is represented by the Montana Chapter of the American Council of Engineering Companies (ACEC).

MDT meets with the Montana Chapter of ACEC periodically (typically quarterly) to exchange information on industry news and events, work collaboratively on issues of concern and promote positive relationships between MDT and the Consultant community. The meetings provide a good forum for the expression of ideas that can result in improvements to the MDT Consultant program. MDT attendance at these meetings, which are semi-formal, typically include the Director, Deputy Director, Chief Operations Officer and Consultant Design Engineer. Members of the Montana ACEC also meet with the Consultant Design Engineer periodically for informal working meetings regarding business or procedural issues.

MDT is committed to working with the Montana ACEC to develop standard contract language that considers the needs and business realities of the Consultant community in addition to the legitimate interests of MDT. Therefore, the standard contract is not revised without ACEC input and opportunity for comment. See Chapter 12.

3.2.7 Metropolitan Planning Organizations (MPOs)

Occasionally, MPOs use Consultant services for projects that are administered by the Consultant Design Bureau. The Consultant Project Engineer will coordinate with the MPOs through the Statewide Urban Planning Section in the Multimodal Planning Bureau. The discussion in Section 3.2.2 on local governments would apply to coordination activities on these projects.

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Chapter 4
ADMINISTRATIVE POLICIES AND PROCEDURES

Chapter 4 discusses administrative policies and procedures that are internal to the operations of the Consultant Design Bureau.

4.1 PROJECT MANAGEMENT

4.1.1 PMS System

4.1.1.1 Description

MDT uses an automated program project management system (PPMS) to schedule, forecast, monitor and coordinate project development and resources. The Department uses OPX2 software for PMS scheduling. For further information on OPX2, review the *MDT OPX2 Manual* and consult the Engineering Information Services Section (EISS). The PMS applies to both projects designed in-house and projects designed by a Consultant.

Projects are segregated into defined activities with estimated duration and man-hours required for completion. Duration is the number of working days required to complete each activity. Activity durations are used to estimate the total length of time to develop a project. Man-hours are the anticipated number of hours that will be expended toward the completion of the activity. Man-hours are used to estimate the cost and budget required to develop a project.

Each activity has predecessor and successor activities. Arranging the activities in order from predecessor to successor creates the overall project schedule or flow chart. EISS has developed a list of defined activities with standard flow charts for typical MDT projects. The standard flowcharts for Consultant-designed projects include:

1. Consultant Design Flowchart. This flowchart is the primary flowchart used to develop projects designed by Consultants. It is used for all highway projects and rest areas and sometimes modified for use on rare projects such as corridor studies and weigh stations.

2. Consultant Wetland Mitigation Design Flowchart. This flowchart is specifically tailored to wetland projects designed by Consultants, and it includes feasibility-only projects and full wetland design projects. It was created to address the unique project development needs of a wetland project (e.g., early right-of-way involvement) and to create activity names, numbers and descriptions that better fit wetland projects.

3. In-House Design with Environmental Activities Assigned to Consultant Flowchart. This flowchart is intended for projects that are designed in-house but require the services of a Consultant to complete the environmental document. This flowchart is used for EA and EIS documents.

These flowcharts are available at the MDT website.

The discussion in the remainder of Section 4.1.1 describes the coordination between the Consultant Project Engineer (CPE) and others on scheduling for a "Project." For a Term Assignment pursuant to a "Term Contract," the Functional Manager performs this coordination.

4.1.1.2 Project Initiation

After a project is nominated by the stakeholder and approved by the Transportation Commission, Federal funding is secured and a Design Project Manager (DPM) is designated. DPMs are almost always representatives from the Highways Bureau, Bridge Bureau or Traffic and Safety Bureau, depending on the predominant nature of the project. The DPM is responsible for reviewing the system information to ensure that it is correctly assigned based on the initial project nomination. The DPM will then conduct a Preliminary Field Review to better define the project scope and discuss the need for Consultant services, which will be documented in the Preliminary Field Review Report (see Section 6.2).

Occasionally, a project is assigned to a Consultant prior to the Preliminary Field Review. In this scenario, the Consultant scoping meeting (see Section 7.2.1) also serves as the Preliminary Field Review.

4.1.1.3 Establishing the Project Schedule

After the Preliminary Field Review Report is approved and placed in the Document Management System (DMS), the project will be transferred to the Consultant Design Bureau if a Consultant will be used. The Consultant Plans Engineer will assign a Consultant Project Engineer (CPE) to the project. The man-hours and activity durations are a part of the contract negotiations between MDT and the Consultant. The basic process is as follows:

1. The Consultant and CPE agree to the scope of services. See Section 7.2.3.3.
2. The Consultant provides its man-hours and time durations for all Consultant activities.
3. Once these values are identified, the CPE works with EISS to input this data into OPX2.
4. The CPE submits the project schedule to the Consultant for concurrence.
5. The CPE and Consultant negotiate and modify the schedule as necessary.

Once the CPE and Consultant agree to the schedule, the CPE will coordinate with EISS using the following process:

1. With EISS, the CPE reviews the project header information for accuracy. Project information includes project start date, flowchart, etc.

2. The CPE sets a tentative start date.

3. The CPE coordinates with the Preconstruction Engineer to set a "ready date" based on the agreed-upon schedule.

After the CPE and Consultant have agreed to the project schedule, the OPX2 flowchart is submitted to EISS and standard durations are applied to all MDT activities. For non-standard activities, the FMs can review and modify the proposed man-hours and time durations. If the durations are modified, the FM must obtain prior approval from the CPE.

4.1.1.4 CPE Coordination with Functional Units

Section 3.1.3.1 discusses the nature of the technical support that MDT functional units provide to the CPE for a Consultant-designed project. The support is one of the following basic types:

1. MDT units may be responsible for specific project activities, including:
    - agreements with Railroad and Utility Companies (MDT Utility Section),
    - right-of-way issues (MDT Right-of-Way Bureau),
    - coordination with resource agencies (MDT Environmental Services Bureau) and/or
    - other.
2. MDT Units may be responsible for reviewing Consultant deliverables, including:
    - hydraulics,
    - geotechnical,
    - pavement design,
    - structures, and
    - other.

In general, the coordination among the CPE and other MDT units occurs via both structured (through OPX2) and non-structured channels (outside of OPX2). The CPE uses structured communication with Functional Managers (FMs) through OPX2. OPX2, in conjunction with the applicable flowchart, establishes and monitors the required interaction between the CPE and FMs as defined by the flowchart and its related activity descriptions. Non-structured channels include spontaneous, issue-driven meetings, emails, phone conversations, etc. Although the flowchart specifies certain required interactions (e.g., PIH meeting), the non-structured interaction is largely determined at the discretion of the CPE.

4.1.1.5 Project Implementation

The CPE serves as the MDT Project Manager for project implementation and is responsible for all interaction with OPX2. The CPE also performs similar Project Manager duties that the DPM would perform for an in-house designed project. As the project develops, the CPE is responsible for:

1. Changes in Scope. A major change in the project scope will likely result in the need for more or fewer project resources. The CPE will be responsible for initiating these changes in OPX2.

2. Cost Estimates. Although not related to OPX2, the CPE will update construction cost estimate updates to the PMS, when necessary.

3. CPE Status/Monitoring. For the project schedule, the CPE monitors the following and updates the status preferably once a week, but at least once every two weeks:

   - the OPX2 100 Activities, which are the Activities that the Consultant is responsible for; and
   - the OPX2 200 Activities, which are the MDT Activities that the CPE is responsible for.

4. Functional Managers. For the project schedule, the Functional Managers are responsible for:

   - updating the status of their activities in OPX2 once every two weeks at a minimum and preferably once a week; and
   - notifying the CPE of any proposed change to project scope or schedule.

4.1.2 Financial Management System

The Project Analysis Bureau operates the MDT Financial Management System (FMS), which is coordinated with the Statewide Transportation Improvement Program (STIP). The purpose of FMS is to manage and monitor all transportation-related capital and operating project budgets to support the Construction Program. As discussed in Section 4.5.3, the Project Analysis Bureau assigns a unified project number (UPN) to all projects for project accounting. The Consultant Project Engineer uses the UPN to track budgets for Consultant-designed projects.

4.2 INTERNAL COMMUNICATIONS

This Section provides internal "housekeeping" guidance on MDT correspondence for Consultant Design Bureau staff. Chapters 7 and 8 discuss correspondence and communication with Consultants.

4.2.1 Project-Related Correspondence

4.2.1.1 Outgoing Mail

Memoranda are used by MDT to provide written, interdepartmental information between the various Bureaus, Sections, Districts, etc. The memoranda are used to distribute project reports, process approval requests, request project information, submit project information, etc. Project-related letters to Consultants are used to disseminate contract information, request information, submit approvals, etc.

Prepare all memoranda in the standard format including the MDT logo. Complete the heading including the project number, project name and unified project number. For non-project correspondence, the subject line should provide a brief but informative title of the memorandum's purpose.

For letters, use the standard State letter template, which is available on the MDT Intranet.

4.2.1.2 Incoming Mail

For incoming mail, the recipient and/or the Bureau's Administrative Assistant will review incoming correspondence to determine the appropriate distribution. Use the following procedure:

1. All incoming mail will be stamped and dated by the Administrative Assistant.

2. The Administrative Assistant will forward the mail to the appropriate individual. This will usually be the Consultant Project Engineer or CTEP Engineer, but may include others (e.g., Consultant Design Engineer) depending on the document.

3. The recipient will determine the appropriate distribution and indicate this on the distribution stamp that the Administrative Assistant has applied to the document. Any document that is identified as a master file copy is always "green stamped." The recipient will determine if the correspondence is a master file copy or not and will indicate whether a "green stamp" is necessary or not, or recipients can "green stamp" the document themselves before sending the item back to the Administrative Assistant.

4. The document will be returned to the Administrative Assistant for distribution and master filing.

See Section 4.2.1.3 for more specific guidance on project-related correspondence.

4.2.1.3 Project-Related Correspondence

The following provides more specific guidance for processing project-related correspondence:

1. Correspondence generated within Bureau. If the correspondence is for internal distribution, the Administrative Assistant will "green stamp" the original, make the appropriate number of copies, distribute the copies and file the original. If the correspondence is for external distribution, the Administrative Assistant will make a copy of the original, "green stamp" the copy, make the appropriate number of copies for internal Bureau distribution, mail the original and file the "green-stamped" copy.

2. Correspondence generated by MDT Unit external to Bureau. The generating MDT Unit retains the green-stamped original in its filing system. For the original received by the Bureau, the Administrative Assistant will apply the Bureau's distribution stamp and determine the recipients. The CPE will check which file the correspondence is destined for and, after internal Bureau distribution, the Administrative Assistant will file the correspondence.

3. Correspondence generated by sources external to MDT. The Administrative Assistant will apply the Bureau's distribution stamp and determine the recipients. The CPE will check which file the correspondence is destined for and, after internal Bureau distribution, the Administrative Assistant will apply the "green stamp" and file the correspondence.

4.2.2 Signature/Distribution for Project-Related Correspondence

For standardized project-related memoranda and letters, the Consultant Design Bureau has established its protocol with respect to signature authority and distribution. Distributions should reference the Department's standard templates when applicable.

4.2.2.1 Signature by Consultant Design Engineer

Use the following procedures:

1. Contract Funding Approval Memo. The memorandum is written from the Consultant Plans Engineer through the Consultant Design Engineer to the Preconstruction Engineer. The memorandum is submitted to the Consultant Plans Engineer. A carbon copy is not required.

2. Consultant Contract Award Letter. This letter is written from the Consultant Design Engineer to the selected Consultant. A carbon copy is provided to the Consultant Plans Engineer, the project file and other personnel as required.

3. Consultant Contract Closeout Letter. This letter is written from the Consultant Design Engineer to the Consultant. A carbon copy is provided to the Consultant Plans Engineer, the project file and other personnel as required.

4. Scope of Work. The following applies:

   - Distribution Memo for Departmental/FHWA Comment. The memorandum is written from the Consultant Design Engineer to Distribution and then submitted to the Consultant Plans Engineer.

   - Approval Memo. The memorandum is written from the Consultant Design Engineer to the Engineering Division Administrator and then submitted to the Consultant Plans Engineer.

5. Design Exceptions. The following applies:

   - Federal Oversight Projects Approval Letter. The letter is written from the Consultant Design Engineer to the FHWA Operations Engineer and then submitted to the Consultant Plans Engineer.

   - Non-Federal Oversight Projects Approval Memo. The memorandum is written from the Consultant Plans Engineer to the Consultant Design Engineer and then submitted to the Consultant Plans Engineer.

6. Audit Reports. See Chapter 11 for a discussion on the complete audit process.

7. Motor Pool. The Consultant Design Engineer will sign Motor Pool Vehicle Requisition and Trip Ticket requests. If the Consultant Design Engineer is not available, move up the chain of command.

4.2.2.2 Signature by Consultant Plans Engineer

Use the following procedures:

1. Scoping Meeting Minutes Distribution Memo. The memorandum is written from the Consultant Plans Engineer to Distribution. A carbon copy is provided to the Consultant Design Engineer (with attachment), the Consultant Plans Checker Supervisor, the project file, the contract file and other personnel as required.

2. Alignment and Grade Report Approval Memo/Plan-in-Hand Report Approval Memo/Final Plans Review Report Approval Memo. The memorandum is written from the Consultant Plans Engineer to the Consultant Design Engineer. A carbon copy is provided to the Consultant Design Engineer, Consultant Plans Checker Supervisor, the project file and other personnel as required.

3. Consultant Activity Transmittal Memo. This memorandum accompanies the transmittal of Consultant 100 level activity submittals to units within MDT. The memorandum is

written from the Consultant Project Engineer to the appropriate Departmental personnel (Bureau Chief, District Administrator, District Geotechnical Manager, etc.). A carbon copy is provided to the Consultant Design Engineer, the Consultant Plans Checker Supervisor, the project file and other personnel as required.

4. Departmental Review Comments Letter. This letter accompanies comments provided by MDT personnel to the Consultant. The letter is written from the Consultant Plans Engineer to the Consultant. A carbon copy is provided to the Consultant Design Engineer, the Consultant Plans Checker Supervisor, the project file and other personnel as required.

5. Contract Documents. The following applies:

   - Contract Cover Letter. This letter transmits the contracts to the Consultant for its signature. The letter is written from the Consultant Plans Engineer to the Consultant. A carbon copy is provided to the Consultant Design Engineer (without attachments), the contract file and other personnel as required.

   - Contract Notice-to-Proceed Letter. This letter provides the Consultant with a written Notice-to-Proceed and transmits the executed contract to the Consultant. The letter is written from the Consultant Plans Engineer to the Consultant. A carbon copy is provided to the Consultant Design Engineer, the contract file and other personnel as required.

   - Contract Amendments. This letter is written from the Consultant Plans Engineer to the Consultant. A carbon copy is provided to the Consultant Design Engineer (without attachments), the contract file and other personnel as required.

6. Timesheets. The Consultant Plans Engineer will address all timesheet issues/signatures for the Consultant Project Engineers and the Consultant Plans Checker Supervisor.

7. Invoices. The Consultant Project Engineers will approve the invoices for services received. The Consultant Plans Engineer will approve the invoices for payment.

4.2.2.3 Signature Designee on Documents

The Consultant Design Bureau staff may sign documents on behalf of their supervisors. Use the following procedures:

1. Supervisory personnel should designate one or more responsible staff (as required by circumstances) to sign on their behalf during absences.

2. The designated staff should sign their own names to the documents rather than signing the supervisor's name and adding their own initials.

3. Where the supervisor's name or title is printed on the document, Bureau staff should sign their own names with the word "for" preceding the printed name or title of the supervisor. For example:

   IS/James Smith
   for Thomas Jones
   Consultant Design Engineer

4.2.3 Outside Correspondence

4.2.3.1 General

Prepare all written materials for sources outside of the Department on MDT letterhead. However, letters for the Governor's signature will be on the Governor's letterhead. MDT letters will often be written to individuals without a transportation background; use terminology that is understandable to the audience. Correspondence to AASHTO, FHWA, TRB, etc., should use standard highway engineering terminology.

4.2.3.2 Signatures

In general, all letters will be forwarded though the chain of command to the individual signing the correspondence. The following presents MDT policy for signing outgoing letters:

1. Letters to US Congressmen, Governor, legislators, County Commissioners, Mayor and elected officials will be signed by the Director or designee.

2. Letters responding to citizen inquiries will be signed by the Consultant Design Engineer or a higher level, depending on who initially received the letter.

3. Letters that provide non-sensitive information, including routine project-related information, to towns, counties or other local officials should be signed by the Consultant Plans Engineer.

4. Information to Federal and State agencies, AASHTO, TRB, other State DOTs, etc., should be signed by the Chief Operations Officer.

5. For letters to a Consultant, the Consultant Design Engineer will sign the Award Letter. After this, the Consultant Plans Engineer will sign project-related letters to Consultants when the subject matter is routine; the Consultant Design Engineer will sign project-related letters to Consultants when the subject matter is not routine. For all other letters to Consultants, the signature authority is at the discretion of the Consultant Design Engineer.

4.2.3.3 Distribution

The distribution of an outside letter will vary according to the content of the letter. A copy of all letters submitted outside of MDT should be sent to the Preconstruction Engineer. In general, the individual that generates the correspondence will determine who is on the distribution list.

4.2.4 Legislature and Media Contacts

When contacted by news media, legislators, legislative audit staff, other government officials, etc., use the current MDT policy for signature authority, processing and distribution.

4.2.5 Electronic Communications

4.2.5.1 General

MDT staff are encouraged to use email, the internet and the intranet to accomplish their duties. However, access to electronic communication imposes certain responsibilities on the user. MDT must not be exposed to undue legal liabilities. Users may be subject to limitation on their use of electronic communication as determined by their supervisor. See the MDT Policy regarding electronic mail and related services.

4.2.5.2 Status

In general, the policies and procedures that apply to hard-copy communication also apply to electronic communication. Assume that every email will become public knowledge. If there is litigation, the law makes no distinction between hardcopy or electronic communication.

4.2.5.3 Electronic File Protocol

The *MDT Managing Electronic Files and Email* publication presents Department-wide policies, guidelines, etc., on managing the use of the electronic filing system for MDT design projects. The Consultant Project Engineer is responsible for setting up and maintaining an electronic file folder for all electronic project-related documents. Any project-related email correspondence should be copied to the project's e-folder. All emails should contain the project number, project name and unified project number.

Any project-related electronic email that is considered a matter of record must be printed, "green stamped" and filed accordingly. The CPE must do this during the course of the project, not at project conclusion.

4.2.6 Telephone Calls

Documenting telephone calls requires judgment. If the conversation involves the project schedule, budget, scope, etc., then written documentation may be appropriate. This would also apply if, for example, the Consultant Project Engineer provides direction to the Consultant or if a significant decision is made in a telephone conversation.

4.2.7 Meetings

4.2.7.1 General

Meetings must be well planned, attended by the proper individuals and the information disseminated to the affected people in a timely manner. The individual arranging the meeting must always prepare an agenda and prepare minutes of the meeting. This may be accomplished by either the CPE or Consultant.

4.2.7.2 Project Meetings

Project meetings include scoping meetings, negotiations meetings, project review meetings, etc. Chapters 7 and 8 discuss these meetings in detail. The CPE will arrange all project meetings, or the CPE, at his/her discretion, can request that the Consultant arrange the meetings (e.g., date, time, place, attendees).

4.2.7.3 Staff Meetings

Internal staff meetings of the Consultant Design Bureau are held periodically to disseminate administrative information and discuss problems. Staff meetings are typically held monthly. The Consultant Design Engineer usually schedules and conducts the staff meeting.

4.3 INTERNAL BUREAU PROCEDURES

4.3.1 General

The Consultant Design Bureau has developed several internal procedures for various activities performed by the Bureau. This Section presents these selected procedures.

4.3.2 Contract Negotiations

Chapter 7 discusses the details on contract negotiations, including cost elements. Section 11.2 discusses MDT policies for an accepted indirect cost rate for the most recently completed fiscal year. This must be developed in accordance with 23 CFR §172.7(b) based on the cost principles of 48 CFR Part 31. The Consultant Project Engineer (CPE) will use the following internal procedure for negotiating a Contract:

Note: This procedure applies to both the prime Consultant and any subconsultants.

1. Scoping Meeting. The CPE will schedule a scoping meeting, which will occur after Consultant selection. See Section 7.2.1. One objective of this meeting is to agree on the project scope of services that will be used to determine the contract cost estimate. *Note: It is the goal of MDT to complete the scoping meeting within three weeks of selecting a Consultant. The Consultant has seven calendar days to prepare the minutes of the meeting*.

2. Indirect Cost Rate. All new projects require an accepted indirect cost rate. If the Consultant does not have a current MDT indirect cost rate, the CPE will submit the indirect cost rate and any supporting documentation to the Internal Audit Unit, which is signed by the Consultant Plans Engineer. The Consultant should provide its indirect cost rate calculation to MDT as soon as possible, but no later than when submitting the cost proposal. The CPE will request that the Internal Audit Unit provide its recommendation on the acceptance or rejection of the Consultant's indirect cost rate. Upon receipt of the Unit's recommendations, the Administrative Assistant will distribute the reply to the Consultant Design Engineer, the Consultant Plans Engineer, the applicable CPE, the master contract file and the indirect cost rate audit file. The Administrative Assistant will update the Consultant Information System (CIS) within five working days. Sections 11.1 and 11.2 discuss MDT policies on indirect cost rates in detail.

3. MDT Internal Cost Estimate. Prior to reviewing the Consultant proposal, the CPE will prepare an independent cost estimate based on the project scope of services. See Section 7.2.3.1. The CPE's estimate will include the:

    - man-hours,
    - direct expenses,
    - application of standard direct labor rates,

- application of standard indirect cost rate, and
- application of fixed fee.

4. Consultant Cost Proposal. The Consultant will submit its cost proposal to the CPE. See Section 7.2.2. Cost proposals may be reviewed by the Internal Audit Unit at the discretion of the Consultant Design Engineer. The CPE will prepare the transmittal memo to Internal Audit, which is signed by the Consultant Plans Engineer. A carbon copy will be submitted to the Administrative Assistant and the master contract file.

5. Negotiations. As necessary, the CPE will negotiate contract costs with the Consultant. If negotiations are successful, the CPE will prepare a Contract Funding Approval Memo for the Preconstruction Engineer's signature. The memorandum is written from the CPE, through the Consultant Design Engineer to the Preconstruction Engineer. *Note: MDT's objective is that the Preconstruction Engineer's approval will occur within six weeks of the scoping meeting and within nine weeks of Consultant selection.*

4.3.3 Contract Execution

Chapter 12 discusses MDT requirements for contract provisions (e.g., insurance, subcontracting). In addition to the following internal Bureau procedures, Section 7.2.4 further discusses the contract execution process. The CPE will use the following internal procedure for processing the contract:

1. Draft Contract. The CPE will draft a contract using the standard agreement developed by MDT for Consultant contracts and incorporating the project-specific information on:

   - scope of services,
   - schedule, and
   - cost estimate.

2. Internal Distribution. The CPE will submit the draft contract to the Consultant Plans Engineer for review and approval. After receiving the signed Contract Funding Approval Memo from the Preconstruction Engineer and incorporation of any changes made by the Consultant Plans Engineer, the CPE will transfer two copies of the final contract to the Legal Services Unit and then to the Civil Rights Bureau for review and approval.

3. Consultant. The CPE will submit the two originals to the Consultant for signature.

4. MDT Approval. After Consultant signature, the CPE will submit the two originals to the Director (or his designee) for signature. Upon the Director designee signature, the contract has now been executed.

   Note: MDT's objective is that contract execution will occur within two weeks of the Preconstruction Engineer's approval of the contract cost estimate.

5. Distribution. The CPE will send one original executed contract to the Consultant using the standard notice-to-proceed memo template and one original to the master project file. Copies of the contract will be sent to others based on the most current distribution practices.

4.3.4 Monthly Invoices/Progress Reports

Section 8.3.1 discusses MDT requirements for Consultant submission of monthly invoices and progress reports.

4.3.4.1 Projects and Special Projects

For Projects and Special Projects, the Consultant is typically required to submit one original and one copy of the monthly invoice, and one original and five copies of the progress report. The CPE will use the following internal procedure to process these:

1. Received. The Administrative Assistant will date and stamp the original invoice, a copy of the invoice, the original progress report and all copies of the progress report on the day it is received by the Bureau. The Administrative Assistant will also apply the payment/approval stamp to the original invoice.

2. Approval. The CPE will review the invoice/progress report and, if acceptable, initial and date the payment approval stamp for services received. The Consultant Plans Engineer will approve the invoice/progress report for payment by signing and dating the payment/approval stamp.

3. Payment. The Consultant Plans Engineer will transmit the original and one copy of the approved invoice plus the original and all copies of the progress report to the Engineering Division Fiscal Officer for payment.

   Note: MDT's objective is that payment will be provided within one month of receiving the invoice for invoices meeting the requirements of the contract.

4. Distribution. The Fiscal Officer will send the original invoice and original progress report to the Consultant Design Engineer; these documents are placed in the contract file by the Administrative Assistant. The Fiscal Officer will keep the copy of the invoice and distribute the progress reports to the applicable recipients.

4.3.4.2 Term Contracts

For Term Assignments pursuant to a Term Contract, the Consultant typically submits one original and two copies of the invoice, and one original and five copies of the progress report to the MDT Functional Manager (FM) for the contract. The FM will use the following procedure to process these:

1. Received. An employee within the functional unit will date and stamp the original invoice, a copy of the invoice, the original progress report and all copies of the progress report on the day it is received by the unit. The functional unit will also apply the payment/approval stamp to the original invoice.

2. Approval. The FM will review the invoice/progress report and, if acceptable, initial and date the payment approval stamp for services received. The CPE will approve the invoice/progress report for payment by signing and dating the payment/approval stamp.

3. Payment. The FM will keep one copy of the invoice/progress report and submit the original and one copy to the CPE for payment approval. The CPE will transmit the remaining package to the Consultant Plans Engineer to be forwarded to the MDT Fiscal Officer for the Engineering Division for payment.

   Note: MDT's objective is that payment will be provided within one month of receiving the invoice for invoices meeting the requirements of the contract.

4. Distribution. The Fiscal Officer will send the original invoice and original progress report to the Consultant Design Engineer; these documents are placed in the contract file by the Administrative Assistant. The Fiscal Officer will keep the copy of the invoice and distribute the progress reports to the applicable recipients.

4.3.4.3 Business Process

The following documents the MDT business processes for Consultant payments:

- Figure 4.3-A "Consultant Design Accounting Procedures (Projects and Special Projects)"
- Figure 4.3-B "Consultant Design Accounting Procedures (Term Assignments for Term Contracts)"

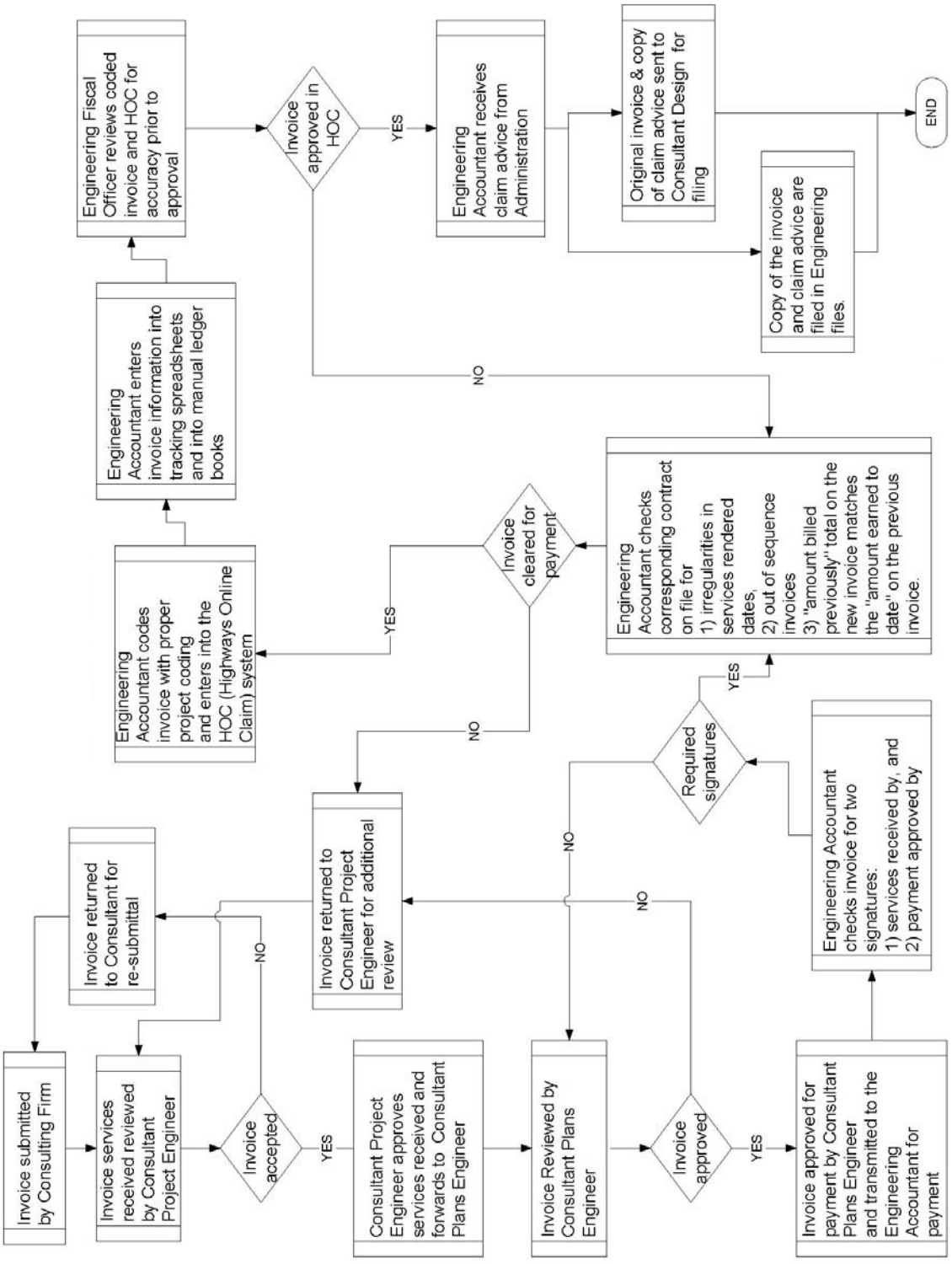

Figure 4.3-A — CONSULTANT DESIGN ACCOUNTING PROCEDURES (Projects and Special Projects)

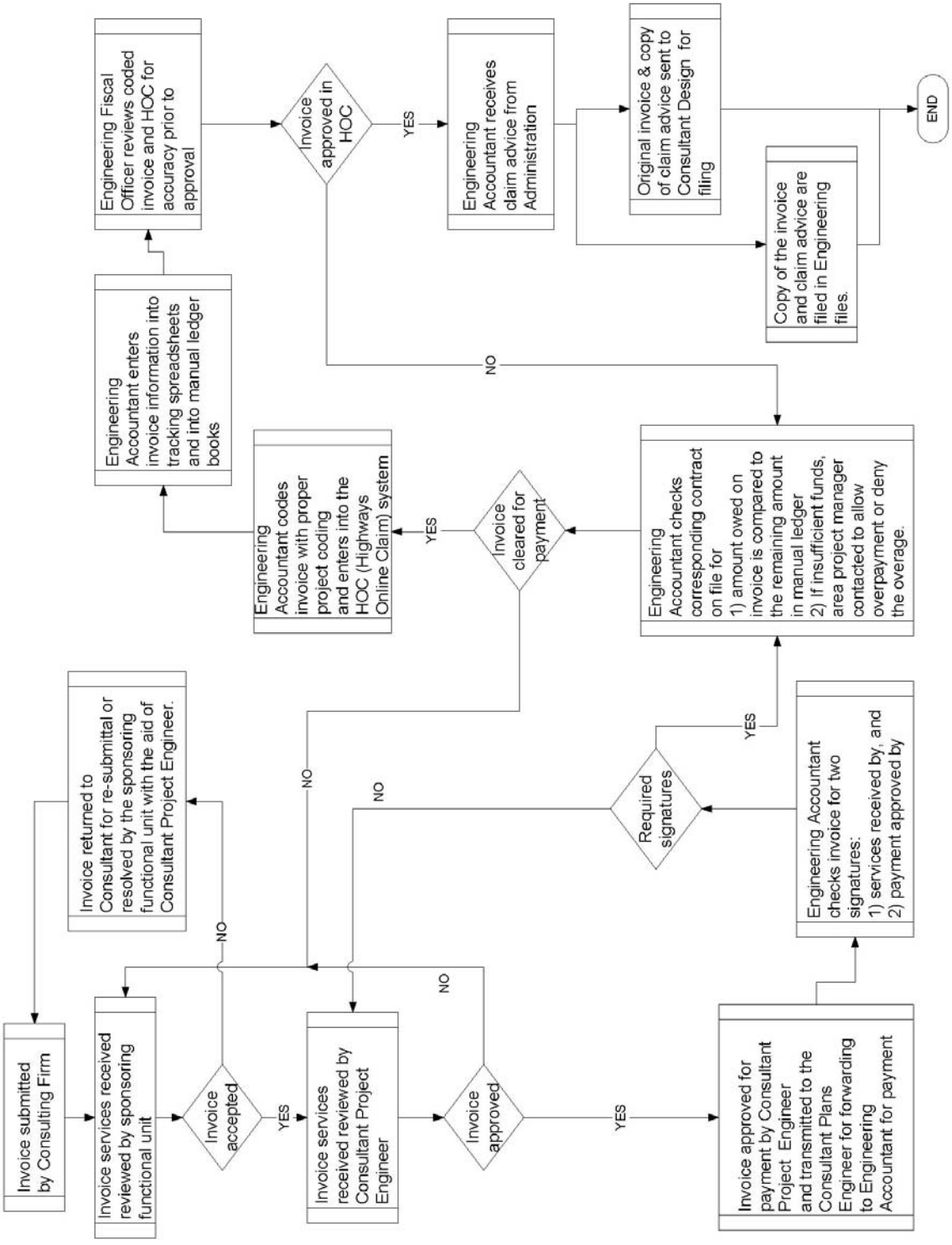

Figure 4.3-B — CONSULTANT DESIGN ACCOUNTING PROCEDURES (Term Assignments for Term Contracts)

4.4 RECORDS AND FILES

4.4.1 MDT Document Management System (DMS)

The DMS is the Department's standard location for electronically storing its project-related documents (i.e., "cradle to grave") for both preconstruction and construction. The DMS is used for both in-house designed and Consultant-designed projects; however, DMS does not store information related to Consultant contracts. The system serves as a single source of project records to provide all authorized MDT personnel with access to needed project information. The Information Services Division maintains, updates and supports DMS; see the *MDT Document Management System User's Manual* for more information.

4.4.2 Consultant Information System (CIS) Database

The CIS database provides a central, automated source for the Consultant Design Bureau to facilitate its responsibilities to monitor and manage the work performed by Consultant firms under contract to MDT. CIS provides a centrally managed application for contracts and document submittals, which is intended to:

- streamline the document submission process,
- improve the management of contracts and term contracts,
- enhance the efficiency of document search and retrieval, and
- segregate data into meaningful formats.

The CIS database is only for use by MDT staff. The database information can be segregated into multiple formats (e.g., by Consultant, by project type) to provide meaningful comparisons for Bureau staff evaluation.

4.4.3 Shared Drive

The shared drive is an electronic storage area that stores Consultant information, correspondence, emails, contracts, term contracts and project-related documents. Only the Consultant Design Bureau staff is authorized to access the shared drive.

4.4.4 Project-Specific Documentation

The Consultant Design Bureau maintains several hardcopy files to store its project-specific documentation. At the conclusion of project construction, files are purged to eliminate non-master file copies, then all of these files are transferred to the MDT Records Management Section for permanent storage.

4.4.4.1 Master Project File

The master project file is a hardcopy file maintained by the Consultant Design Bureau for Projects and Special Projects. This file includes the project-related information (e.g., reports, correspondence, surveys). For Term Assignments, project-related documents are stored by the applicable functional unit.

4.4.4.2 Master Contract File

The master contract file is a hardcopy file maintained by the Consultant Design Bureau. This file includes contract-related documents (e.g., contracts, amendments, invoices, insurance documents). The Consultant Design Bureau maintains the master contract file for Projects, Special Projects and Term Contracts.

4.4.4.3 Other Project-Related Files

The Consultant Design Bureau maintains other files as needed on a project-by-project basis.

4.4.5 Audit File

The Consultant Design Bureau maintains the audit file for MDT Consultants, which is a hardcopy file. The data is segregated by Consultant firm (subconsultant data remains separate) and calendar year. The audit file may include for each Consultant/subconsultant:

- financial compliance audits,
- performance audits, and
- accounting system audits.

4.4.6 Indirect Cost Rate Audit File

The Consultant Design Bureau maintains the indirect cost rate (i.e., overhead rate) file for MDT Consultants, which is a hardcopy file. The data is segregated by Consultant firm.

4.5 PROJECT NUMBER EXPLANATION

4.5.1 Federal-Aid Projects

Example Project: F 1-9(23)565	
Element	**Comment**
F = Funding Designation	It generally designates the roadway system or type of work being performed.
1 = Route Number	Refer to the Montana Federal-Aid Log for route numbers and descriptions. The route number may be an Interstate, Primary, Secondary or Urban Route.
9 = County Designation	Sequential County number in which the route has traveled through. In this project, the number 9 is the 9th County on this route, normally increasing from the West to East and South to North.
23 = Agreement Number	Sequential number relating to the number of projects performed in this route/county section.
565 = Milepost on Route	Refer to the Montana Federal-Aid Log. Specific for that segment of the route, normally increasing from West to East and South to North.

4.5.2 State-Funded Only Projects

The prefix for all 100% State-funded projects is “SF.”

4.5.3 Uniform Project No./Control No.

The Project Analysis Bureau assigns project numbers to all MDT projects. The control number (CN) is a 4-digit code. The unified project number (UPN) is the CN plus 3 digits to identify the MDT unit to which the project is assigned. The UPN is the project accounting number that ties together all phases of a project.

4.6 PROJECT WORK TYPE CODES

Figure 4.6-A provides a list of the standardized project work type codes used by MDT. The applicable project work type number will be determined during the Preliminary Field Review. It may be revised for the Scope of Work Report.

EISS will use the Preliminary Field Review and Scope of Work Reports to input the project work type number into the Document Management System. Changes to the project work type after the Scope of Work Report has been approved must be agreed upon by EISS and the Fiscal Officer. If there are any questions concerning assigning or changing the project work type number, contact EISS.

Number	Description
Roadway	
110	New Construction
111	New Construction – Facilities
120	Relocation
130	Reconstruction – With Added Capacity
140	Reconstruction – Without Added Capacity
141	Reconstruction – Remove and Replace Culverts
150	Major Rehabilitation – with added capacity
151	Major Rehabilitation – without added capacity
160	Minor Rehabilitation
170	Restoration and Rehabilitation – PCCP
172	Restoration and Rehabilitation – Facilities
180	Resurfacing – Asphalt (Thin Lift ≤ 0.20 ft) (including Safety Improvements)
181	Resurfacing – Asphalt (Thin Lift ≤ 0.20 ft) (Scheduled maintenance)
182	Resurfacing – PCCP
183	Resurfacing – Seal & Cover
184	Resurfacing – Gravel
185	Resurfacing – Crack Sealing
Bridges	
210	New Bridge
220	Bridge Replacement with added capacity
221	Bridge Replacement without added capacity
222	Bridge Replacement with a culvert without added capacity
223	Bridge Replacement with culvert with added capacity
230	Bridge Rehabilitation with added capacity
231	Major Bridge Rehabilitation without added capacity
232	Minor Bridge Rehabilitation
Safety	
310	Roadway & Roadside Safety Improvements
311	Railroad/Highway Crossing Safety Improvements
312	Structure Safety
313	Pedestrian and Bicycle Safety
Traffic Operation & Control Systems	
410	Traffic Signals and Lighting
411	Signing, Pavement Markings, Chevrons, etc.
412	Miscellaneous Electronic Monitoring or Information Services
Environmental	
510	Environmental
520	Landscaping, Beautification
Miscellaneous	
610	Maintenance Stockpiles
620	Bicycle and Pedestrian Facilities
630	CTEP – Monitoring and Inspection
640	Bridge Maintenance Safety Inspection
650	Miscellaneous Study Programs
660	Historic Preservation

Figure 4.6-A — PROJECT WORK TYPE CODES

4.7 AGREEMENTS

MDT projects often require legal agreements between MDT and other entities to ensure that the expectations of all parties are met. For example, legal agreements may be required for defining the maintenance responsibilities between MDT and a local agency. Examples of agreements may include:

- City Construction Agreement (State-maintained routes),
- City-County Construction Agreement (city-maintained routes),
- City Construction Agreement (city-maintained routes),
- County Resolution (secondary routes),
- Railroad Agreement,
- Utilities Agreement,
- Right-of-Way Agreement(s), and
- Tribal Agreement.

MDT units other than the Consultant Design Bureau are typically responsible for negotiating and executing agreements. However, the Consultant Project Engineer is responsible for ensuring that all applicable agreements are executed for each Consultant-designed project.

4.8 EMPLOYEE POLICIES AND PROCEDURES

The Montana Department of Administration establishes personnel policies and procedures for employees of the Montana State government. The Department has published several manuals, guides, memoranda, policies, etc., to document the rights, protection and responsibilities of State employees. The MDT Human Resources Division has supplemented the Department of Administration's documents with its internal publications that address a variety of personnel issues specifically for MDT.

Chapter 5
RESERVED

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Chapter 6
CONSULTANT SELECTION

6.1 GENERAL

6.1.1 MDT Objective

Chapter 6 documents the MDT selection process to ensure that all interested Consultants have access to the information required to pursue opportunities for professional engagements with MDT. The Consultant selection process is intended to provide MDT with access to the State and national Consultant community. For each project, this maximizes the probability that the Department will select the Consultant that will best deliver the services needed to meet the project objectives

6.1.2 Types of Professional Services

For engineering, surveying and architectural (ESA) services, MDT uses a qualifications-based process and an open competition to select Consultants to perform professional services for the Department. For professional, non-ESA services, MDT considers cost in its selection process in addition to qualifications. These types of services include right-of-way acquisition, geotechnical drilling, cultural resource surveys, biological resource assessments and wetland monitoring. Professional, non-ESA services do not require professional liability insurance or professional licensing by the State of Montana.

6.1.3 Legal Authority (ESA Professional Services)

For ESA professional services, the MDT Consultant selection process is authorized by, and must meet the requirements of, the following.

6.1.3.1 Advertisement

MCA Section 18-8-201 of the Montana Statutes for A/E selection establishes a State policy that governmental agencies:

- publicly announce requirements for architectural, engineering and land surveying services, and
- negotiate contracts for such professional services on the basis of demonstrated competence and qualifications for the type of professional services required and at a fair and reasonable price.

6.1.3.2 Selection

MCA Section 18-8-204 stipulates in part that:

- Agencies may encourage firms to submit annually or biennially a statement of qualifications and performance data.
- Agencies shall evaluate current statements of qualifications and performance data on file with the agency, together with those that may be submitted by other firms regarding the proposed project.
- Agencies shall conduct discussions with one or more firms regarding anticipated concepts and the relative utility of alternative methods of approach for furnishing the required services.
- Agencies shall then select, based on criteria established under agency procedures and guidelines, the firm considered most qualified to provide the services required for the proposed project.

6.1.3.3 Federal Highway Administration

23 CFR Part 172 "Administration of Engineering and Design Related Service Contracts" presents the FHWA requirements for the procurement of professional ESA services. These provisions require that a contracting agency must prepare written procedures for each method of procurement it proposes to use. For most procurements, contracting agencies must use competitive negotiation for the procurement of engineering and design-related services when Federal-aid highway funds are involved in the contract, and agencies must use a qualifications-based selection procedure. FHWA further requires that the proposal solicitation (project, task or service) process shall be by public announcement, advertisement or any other method that assures that qualified in-State and out-of-State Consultants are provided a fair opportunity to be considered for award of the contract. Price shall not be used as a factor in the analysis and selection phase.

6.1.4 Legal Authority (Non-ESA Professional Services)

Section 2.5.602 "Competitive Sealed Proposals" of the Administrative Rules of Montana applies to procurements for non-ESA professional services. This Section stipulates in part that "price will only be one of the criteria considered in determining an award."

6.1.5 Types of Consultant Contracts

All MDT Consultant projects are one of three basic types, as discussed below.

6.1.5.1 "Project"

A "Project" provides professional services on a traditional Consultant design project that typically requires a wide variety of services. These projects typically require engineering design and analyses and result in the preparation of plans, specifications and cost estimates for the construction or reconstruction of a highway facility. Examples include road design and bridge design projects, which, in addition to the road design/bridge design expertise, may require expertise in hydraulics, traffic engineering, geotechnical engineering, pavement design, environmental studies, etc.

6.1.5.2 "Term Contract"

"Term Contracts" are ongoing, general contracts for similar-type work on numerous MDT projects. Term Contracts use Consultants to perform services on an as-needed basis. These contracts typically extend for a period of two years to perform these services. They enable the Department to quickly procure needed services to meet project development needs through a Term Assignment. Typically, Term Contracts are used by MDT functional units (e.g., geotechnical, hydraulics, surveying, right-of-way, environmental) for MDT-designed projects when the MDT unit lacks adequate staff or expertise to complete its work within the project schedule. If several functional units envision using a Term Assignment on a MDT-designed project, then the Consultant Design Bureau should advance the project as a Consultant Project.

6.1.5.3 "Special Project"

"Special Projects" are used to perform special studies, analyses, etc., or to prepare products that have a general use for MDT. These projects typically do not meet any of the descriptions for the Categories of Service in the MDT bi-ennial Consultant prequalification solicitation. A standard characteristic of a Special Project is that it rarely results in the expenditure of construction funds. Examples include:

- the preparation of manuals;
- traffic engineering studies (e.g., speed studies, school zone studies); and
- safety engineering improvement studies.

6.2 IDENTIFICATION OF CONSULTANT NEED

6.2.1 Project

For MDT-designed projects, one MDT unit serves as the lead for project development. The lead unit is almost always the:

- Road Design Section (for predominantly roadway projects),
- Bridge Bureau (for predominantly bridge projects),
- Traffic Engineering Section (for predominantly traffic projects), or
- Consultant Design Bureau.

Once a Project is programmed for Federal-aid funds, the applicable MDT lead unit will usually conduct a Preliminary Field Review (PFR) and prepare a PFR Report. The PFR Report provides documentation on many engineering and environmental aspects of the proposed project, as discussed in the following documents:

- Chapter 3 of the *MDT Road Design Manual*
- Chapter 4 of the *MDT Structures Manual*
- Chapter 2 of the *MDT Traffic Engineering Manual*

In the PFR Report, the lead unit may propose that Consultant services be used for project development. If the MDT lead unit recommends the use of a Consultant, the PFR Report should provide a statement on the justification for using a Consultant. In addition, the Consultant Design Bureau requires the following information to initiate the process of securing Consultant services for a Project:

- project description;
- scope of work statement;
- services to be provided by MDT;
- source of funding; and
- an estimated cost of construction (i.e., a preliminary cost estimate).

A PFR, although preferable, is not the only mechanism that can be used to identify the need for a Consultant Project and to initiate the process to select a Consultant. A District Administrator or Bureau Chief (or designee) may submit a written request to the Consultant Design Engineer. The request must include the information listed above for the Consultant Design Bureau to initiate the selection process. The Bureau will then initiate the process to select a Consultant for the Project. See Section 6.3.

6.2.2 Term Contract

For a MDT-designed project, the lead unit typically requires several support services during project development. This could include one or more of the following:

- geotechnical,
- environmental,
- right-of-way,
- utilities/railroads,
- hydraulics, and
- surveying.

The MDT units that are responsible for providing these technical support services may not have the in-house resources to deliver the services for the MDT Program within the schedule established for the Preconstruction Program. If a MDT functional unit recognizes the need for a Consultant Term Contract, the Bureau Chief (or designee) or District Administrator must submit a written request to the Consultant Design Engineer, which must include:

- a brief scope of services,
- the desired number of contracts/Consultants,
- the desired contract dollar ceiling,
- the term (or duration) of the contract, and
- the expiration date.

For the contract dollar value, MDT policy imposes a $300,000 cap on the value of a Term Contract, which applies to the entire duration of the Contract. The standard term is two years. If the sponsoring unit desires a longer term, the submission to the Consultant Design Engineer must provide a justification.

6.2.3 Special Project

MDT sometimes secures Consultant services for specialty work that is not related to the development of an individual construction project and, typically, is not managed by OPX2 and is not included in the MDT Tentative Construction Plan (TCP). For these Special Projects, a Preliminary Field Review rarely occurs. To initiate this type of Consultant project, the Bureau Chief (or designee) or District Administrator must submit a written request to the Consultant Design Engineer. The request must include the following:

- project description,
- scope of work statement,
- source of funding, and
- estimated cost of Consultant work.

6.2.4 Request for Consultant Services

The initiating MDT unit must submit the Request for Consultant Services Form. See the next page.

Request for Consultant Services

Send completed form to the Consultant Design Bureau for processing.

Project Name	Project Number	Fiscal Year	District

Reason for Requesting Consultant Services:	Project Type: ☐ Project ☐ Term Contract ☐ Special Project
☐ Special expertise required	Full Federal Oversight Project: ☐ Yes ☐ No
☐ Consultant services needed to meet project schedule	Utility/RR Coordination and/or other MDT involvement Needed: ☐ Yes ☐ No

Estimated Time to Perform Services	Estimated Cost of Services	Estimated Construction Cost	Obligated/Available Funding*	* If amount entered is $0, please explain resources you are exploring to obtain funding.
Months	$	$	$	

Provide Summary of Work Required

Local Sponsor (if applicable)	Local Sponsor Contact Name	Phone Number

Requested by	Title	Date

This part shall be completed by the Consultant Design Bureau

Type of Solicitation Process:

☐ Prequalification; Category of Service: _____
☐ Project-Specific (Project or Special Project)
☐ Project-Specific (Term Contract)
☐ Hybrid (Project or Special Project)
☐ Sole Source
☐ Small Contract

Approved By	Date

6.3 CONSULTANT SOLICITATION PROCESS

6.3.1 General

Section 6.3.1 presents MDT policies and procedures that apply to more than one of the Consultant solicitation processes used by the Department.

6.3.1.1 Process Types

MDT may use one of several processes to select a Consultant, including:

- prequalification (for a "Project," "Special Project" or "Term Contract") (see Section 6.3.2),
- project-specific (for a "Project," "Special Project" or "Term Contract") (see Section 6.3.3),
- hybrid (for a "Project" or "Special Project") (see Section 6.3.4),
- sole source (see Section 6.3.5), or
- small contracts (see Section 6.3.6).

The Consultant Design Engineer has the authority to determine which Consultant selection process to use on a case-by-case basis.

6.3.1.2 Consultant Participation (Mailing List)

Consultants interested in providing services to MDT must submit the Federal SF-330, Part II, "Architect-Engineer Qualifications" to the Consultant Design Engineer. This submission will then place a Consultant on the mailing list to automatically receive MDT solicitations for Consultant services. The following steps must be completed to be considered on the mailing list:

- A letter identifying the firm's field(s) of expertise.
- A completed Standard Form 330, Part II, PDF/Word.
- A completed Master Address Categories List.
- A completed Consultant's Update File.

All information must be submitted electronically. Additional information can be accessed from the following link:

http://www.mdt.mt.gov/business/contracting/mailinglist

6.3.1.3 Advertisement

MDT advertises for Consultant services on the MDT's website at http://www.mdt.mt.gov/business/contracting.shtml, which provides a link to the State of Montana website. The Consultant Design Bureau may also use one or more of the following to advertise projects:

- major newspapers in Montana, and/or
- direct mail list or email solicitation to all Consultants on the appropriate mailing list.

MDT may also use direct mail or email to a Consultant not on the mailing list for which MDT has knowledge that the Consultant may be interested in the project.

6.3.1.4 MDT Website

The MDT website provides the following information of general interest to Consultants:

- the *MDT Consultant Services Manual*,
- the MDT Consultant Prequalification Roster,
- recently selected Consultants, and
- upcoming projects proposed for Consultant solicitation.

The MDT website also contains other information of interest to Consultants (e.g., MDT manuals, reports, memoranda).

6.3.1.5 Request for Statements of Qualification

The Consultant Design Bureau is responsible for preparing all Requests for Statements of Qualification (SOQs) related to ESA contracts, with assistance as needed from one or more MDT units. For non-ESA prime Consultant selection, it is recommended that the CPE work with the MDT Purchasing Services Section. The content of the standard Request for SOQs is:

- scope of services;
- project schedule;
- proposal submittal (e.g., number of copies, due date);
- proposal contents (e.g., organization, topics, maximum number of pages, proof of indirect cost rate audit);
- proposal evaluation;
- future contractual requirements;
- DBE goals;
- non-discrimination requirements; and
- contact person.

6.3.1.6 Rating Panel

The Rating Panel is responsible for the evaluation of Consultant SOQs on MDT solicitations for Consultant services. The Panel will evaluate the SOQs based on a consistent method for ranking and will document each factor evaluated. The following presents the typical evaluation criteria for all types of projects specifically for the prequalification process:

1. Location: 5 pts

   Note: For the prequalification process, this criterion will be applied at the time of final selection for specific projects, not during the rating of the SOQ. The score will be based on the proximity of the firm's office to the project site.

2. Quality of Firm and Personnel: 30 pts

   - Related experience on similar projects.
   - Qualifications, experience and training of personnel to be assigned to projects.

3. Capacity and Capability of Firm: 35 pts

   - Ability to meet technical requirements and applications.
   - Compatibility of systems and equipment (e.g., CADD, word processing).
   - Capability of firm to meet project time requirements.
   - Capability to respond to project and Department requirements.

4. Record of Past Performance and Reference Checks: 30 pts

   - Previous record with the Department, quality of work, on-schedule performance and cooperation with the Consultant Design Engineer and other Department staff.

   - No previous record with the Department will require reference checks.

For any selection criteria for the Consultant selection processes, the evaluation criteria may vary from the list above as determined on a project-by-project basis. The project-specific criteria is at the discretion of the Consultant Design Engineer.

The Consultant Design Engineer determines the membership of the Rating Panel, which will be a minimum of two and preferably three or more. The Rating Panel members assign a score to each Consultant for each evaluation criteria (from zero to the maximum number of points). The Panel members will clearly document their ratings on the MDT Evaluation Form, provide comments/remarks supporting the ratings and submit these to the Consultant Design Engineer.

6.3.1.7 Consultant Selection Board

The authority to select Consultants to provide professional services to MDT is vested in the Consultant Selection Board, notwithstanding Sections 6.3.5 or 6.3.6. Membership on the Board may include:

- Consultant Design Engineer, Chairman (Non-Voting Member);
- Director (Voting Member);
- Deputy Director (Voting Member);
- Chief Operations Officer (Voting Member);
- Highways and Engineering Division Administrator (Voting Member);
- Preconstruction Engineer (Voting Member);
- Highways Engineer (Voting Member);
- Respective Bureau Chief or designee (Ad-Hoc Voting Member);
- Respective District Administrator (Ad-Hoc Voting Member);
- local agency representative (Ad-Hoc Voting Member); and
- others as necessary, as determined by the Consultant Design Engineer.

All Voting Members are permanent members of the Consultant Selection Board. All Ad-Hoc Voting Members are selected as applicable to a specific project. A minimum of three Voting Members are required to represent a quorum; i.e., to transact business.

For Consultant projects utilizing the prequalified process, the Consultant Design Engineer presents the prequalified rankings to the Consultant Selection Board. For Consultant projects utilizing the RFP/RFQ process, the CDE presents the ratings and recommendations from the Rating Panel to the Consultant Selection Board. The Board may consider the following factors in addition to the Rating Panel's recommendations:

- specific type of project,
- location of project,
- experience of firms in the specific locale of project,
- existing work load with MDT,
- past performance as of that day, and
- other factors as appropriate.

After discussion and a motion to vote, the Consultant Selection Board will typically select at least three Consultants (identified in ranked order) for that project or Term Contract. The Chairman prepares the Consultant Selection Board Summary Meeting minutes, which will record the Board's rankings. The Consultant Design Engineer will contact each of the selected firms to discuss the project and identify any significant changes the firms may have encountered since the prequalification process was initiated. If the Consultant Design Engineer identifies significant changes that have occurred since the prequalification process was initiated, the Consultant Design Engineer will notify the Consultant Selection Board. Upon final action by the Consultant Selection Board, the Consultant Design Engineer will authorize the Consultant Project Engineer to begin negotiations with the top-ranked firm for that project. Failure to

complete negotiations within a specified time frame (see Section 7.2.5) may result in the termination of negotiations, and the Department may initiate contract negotiations with the next selected Consultant (i.e., next ranked firm).

6.3.1.8 Consultant Contact with MDT

From the time of advertisement until the official Consultant selection, the Consultant shall have no contact with MDT with respect to the solicitation except through the Consultant Design Engineer. As appropriate, the Consultant Design Engineer may authorize another MDT staff member to discuss aspects of the solicitation with the Consultant.

6.3.1.9 Announcement of Selection

The Consultant Design Engineer will prepare the Award letter announcing the results of the evaluation process for each solicitation, depending on the Consultant selection process:

1. Prequalification Process. When a selection for a project is made, MDT does not notify those firms not selected. If requested, MDT will inform each Consultant of its numerical rank for each category of service for which the Consultant submitted. MDT will not inform the Consultant of any other Consultant's ranking.

2. All Other Solicitation Processes. MDT will prepare the Award letter to the top-ranked Consultant for that project. All other Consultants that submitted will receive a letter of appreciation for participating in the selection process.

6.3.1.10 Debriefing

A Consultant desiring a debriefing can schedule an appointment with the Consultant Design Engineer for either a telephone or in-person debriefing. The purpose of the debriefing will be for the Consultant Design Engineer to inform the Consultant of its strengths and weaknesses in its proposal. MDT will not divulge certain information such as names of the Rating Panel members, comments by specific Rating Panel or Consultant Selection Board members, other firm proposals, etc. MDT will not inform the Consultant of any other Consultant rankings.

6.3.1.11 Local Agency Use of Consultants

Chapter 12 of the *MDT Local Agency Guidelines* documents the responsibilities and requirements for local agencies that use Consultant services using Federal and/or State funds. This includes the advertisement for Consultant services and Consultant selection.

6.3.1.12 Marketing of Consultant Services

Within a context that is not related to a specific project solicitation, Consultants are encouraged to inform MDT of the services that they provide. However, the initial point of contact should be the Consultant Design Engineer. Consultants should not approach District Administrators, Bureau Chiefs, members of the Consultant Selection Board, etc., without approval from the Consultant Design Engineer.

6.3.2 Prequalification Process (for a "Project" or "Term Contract")

6.3.2.1 Description/Application

When possible, MDT prefers the prequalification process to select Consultants to provide professional services to the Department. This process is applicable to most "Projects" and "Term Contracts"; however, it is rarely applicable to "Special Projects." The basic concept of the prequalification process is to, through a Request for Statements of Qualification, establish a ranked roster of Consultants within specific categories of service. These categories represent a large majority of the types of services that MDT will need. Then, for a specific Project or Term Assignment, MDT can quickly select a Consultant for negotiations from the ranked roster of Consultants.

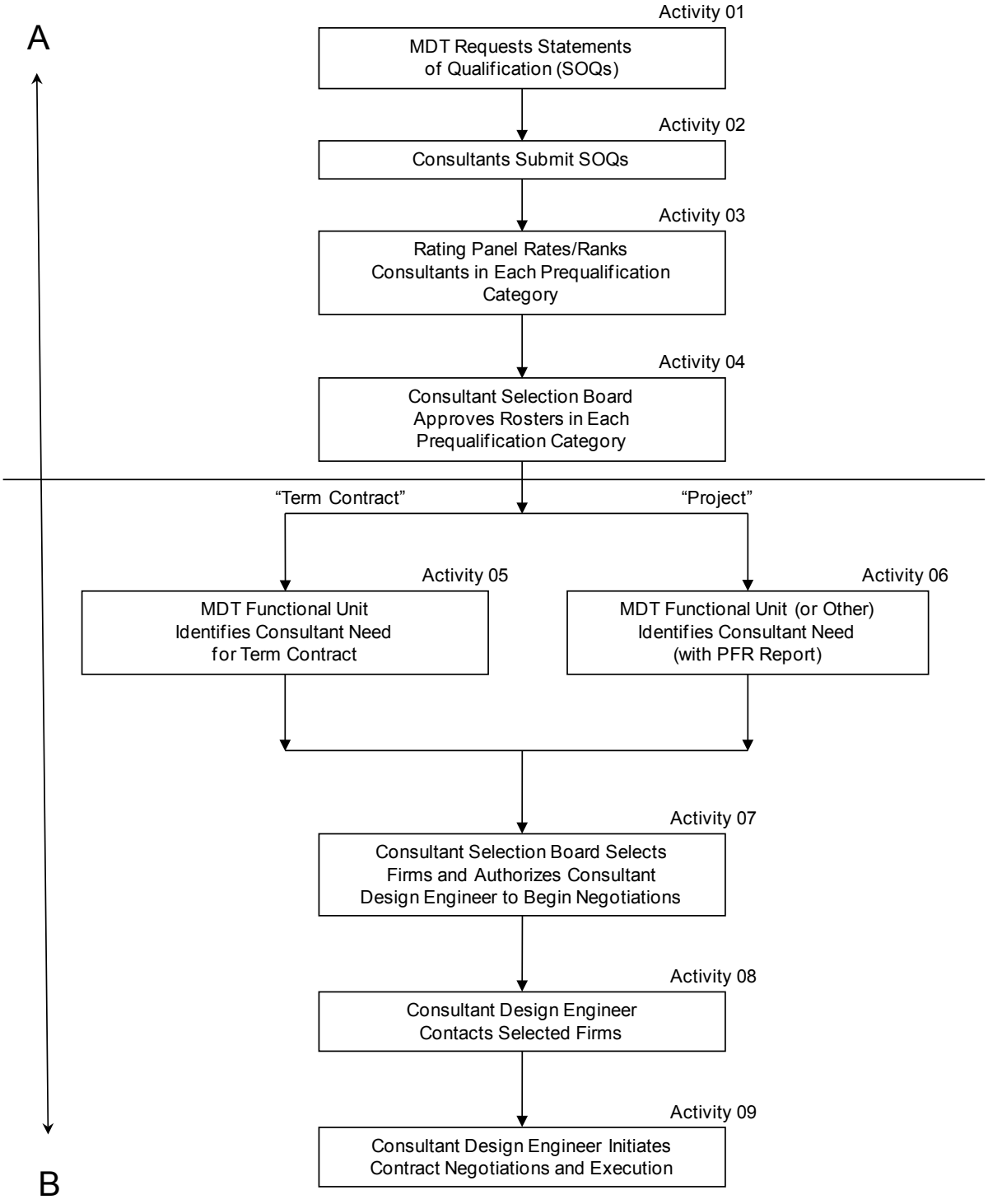
Figure 6.3-A presents the basic steps in the prequalification process. The following Sections elaborate on each activity within the process.

6.3.2.2 Activity 01 — Request SOQs

Once every two years (typically in March or April), the Consultant Design Bureau issues its Request for Statements of Qualification (SOQs) from Consultants interested in participating in MDT's prequalification process. In the "off" years, Consultants have the opportunity to update their SOQs if a firm's makeup or personnel has changed significantly from the original submission. Consultants not on the original roster will also have the opportunity to submit their SOQs in the off year.

As of the publication of this *Manual*, MDT has identified nine categories of service for which Consultants may become prequalified:

- Comprehensive Roadway Design,
- Bridges and Structures,
- Geotechnical and Materials,
- Traffic and Safety Engineering,
- Hydraulics and Hydrology,
- Right-of-Way Appraisal and Acquisition,
- Environmental and Corridor Studies,



Note: For Activities 01 through 04 ("A"), these Activities occur every two years. For Activities 05 through 09 ("B"), these Activities occur when MDT makes a selection.

Figure 6.3-A — PREQUALIFICATION PROCESS (for a "Project" or "Term Contract")

- Land Surveying, and
- Planning.

The Consultant Design Engineer determines the categories. Consultants may submit in one or more categories. Consultants must be prequalified to have an opportunity to perform services for any Project or Term Assignment when the prequalification process is used. See Section 6.3.1.5 for more information on the Request for SOQs.

6.3.2.3 Activity 02 — Consultants Submit SOQs

Consultants submit their SOQs to the Consultant Design Engineer by the MDT deadline, which is approximately six weeks after the issuance of the Request for SOQs. The Consultant Design Bureau prepares the SOQs for distribution to the Rating Panels.

6.3.2.4 Activity 03 — Rating Panel Rates/Ranks Consultants

The Consultant Design Engineer establishes a Rating Panel for each category of service to review and evaluate each Consultant SOQ. The ratings also include the Consultant's past performance. See Section 6.3.1.6 for more information on the Rating Panel activities. The Consultant Design Bureau will distribute the SOQs.

6.3.2.5 Activity 04 — Consultant Selection Board Approves Rosters

The Consultant Design Engineer presents the Rating Panels' ratings and recommendations to the Consultant Selection Board. The Board will establish a ranked roster in each of the prequalification categories of service, which is updated on a yearly basis. Federal regulations require that MDT include a minimum of three Consultants in each category of service.

See Section 6.3.1.7 for more information on the Consultant Selection Board.

6.3.2.6 Activity 05 — Identify Need for Term Contract

The Bureau Chief (or designee) will identify the need for a Term Contract and notify the Consultant Design Engineer. See Section 6.2.2. The Consultant Design Engineer will assign a Consultant Project Engineer (CPE) to manage the Term Contract and coordinate with the sponsoring functional unit. If the prequalification process can be used, see Activity 07. If not, MDT will use the project-specific process for a Project; see Section 6.3.3.

6.3.2.7 Activity 06 — Identify Need for "Project"

The Bureau Chief (or designee) will identify the need for a "Project" and notify the Consultant Design Engineer. See Section 6.2.1. The Consultant Design Engineer will assign a CPE to manage the Project. If the prequalification process can be used, see Activity 07. If not, MDT will use the project-specific process for a Project; see Section 6.3.3.

6.3.2.8 Activity 07— Consultant Selection Board Authorizes Negotiations

As described in the following, the actions of the Consultant Selection Board differ for a Project or a Term Contract.

For a specific Project, the Board may consider the Consultant Design Engineer's recommendations when selecting firms. The Board selects, in order of preference, no less than three firms deemed to be the most highly qualified to provide the services required. The Board then authorizes the Consultant Design Engineer to begin negotiations for the specific Project. See Section 6.3.1.7 on the Board's activities. See Chapter 7 on contract negotiations.

For a Term Contract, the Board may consider the recommendation of the sponsoring functional unit with respect to the number of Consultants selected and respective contract ceiling. The overall objective is to select at least three firms for negotiations; the total of "three" could be reached by designating one or two "alternates" if negotiations with the "selected" firm(s) fail. For example, if the sponsoring functional unit recommends that only one Term Contract be executed, the Consultant Selection Board will select one firm and designate two alternate firms. If, in contrast, the sponsoring functional unit recommends that five firms be selected for negotiations towards a Term Contract, the Board will select five firms and may not designate any alternates.

6.3.2.9 Activity 08 – Consultant Design Engineer Contacts Selected Firms

The Consultant Design Engineer will contact each of the selected firms to discuss the project and identify any significant changes the firms may have encountered since the prequalification process was initiated. If the Consultant Design Engineer determines that significant changes have occurred since the prequalification process was initiated, the Consultant Design Engineer will notify the Consultant Selection Board.

6.3.2.10 Activity 09 – Consultant Design Engineer Initiates Contract Negotiations/ Execution

The Consultant Design Engineer will assign a Consultant Project Engineer to manage the Project or Term Contract. See Chapter 7 for contract negotiations. If fewer than three of the selected Consultants cannot perform the work, then the Consultant Design Engineer will begin negotiations with alternate Consultant(s).

6.3.3 Project-Specific Process for a Project, Special Project or Term Contract

6.3.3.1 Description/Application

Most Special Projects and a few Projects and Term Contracts do not lend themselves to the prequalification process. Examples of projects for which it may be advantageous to use the project-specific process include projects that are extremely large or controversial in nature, very sensitive in nature, or highly specialized for which MDT is unfamiliar with the available Consultant pool.

Figure 6.3-B presents the basic steps in the project-specific process for Consultant projects. The following sections elaborate on each activity within the process.

6.3.3.2 Activity 01 — Request SOQs

Section 6.2 discusses the process to identify the need for Consultant services.

The Consultant Design Bureau, with assistance from the sponsoring functional unit, will prepare the request for Statements of Qualification (SOQs). Section 6.3.1.5 discusses the content of the request. For the project-specific process, the scope of services may have considerable detail on the nature of the project. For example, the scope of services for a comprehensive roadway design project may provide:

- location of the project;
- nature of the work (e.g., new location, reconstruction, overlay and widening);
- requirement for a Montana professional engineering license;
- engineering disciplines required (e.g., roadway design, bridge design, hydraulics, geotechnical engineering, traffic engineering);
- required environmental studies;
- activities for which MDT is responsible (e.g., public involvement, right-of-way, railroad/utility coordination); and
- project deliverables (e.g., environmental document, reports such as Alignment and Grade Review Report and Scope of Work report, plans, specifications, estimates).

6.3.3.3 Activity 02 — Consultants Submit SOQs

Consultants submit their SOQs to the Consultant Design Engineer by the established MDT deadline, which is typically two to four weeks after the issuance of the Request for SOQs. The Consultant Design Bureau prepares the SOQs for distribution to the Rating Panel.

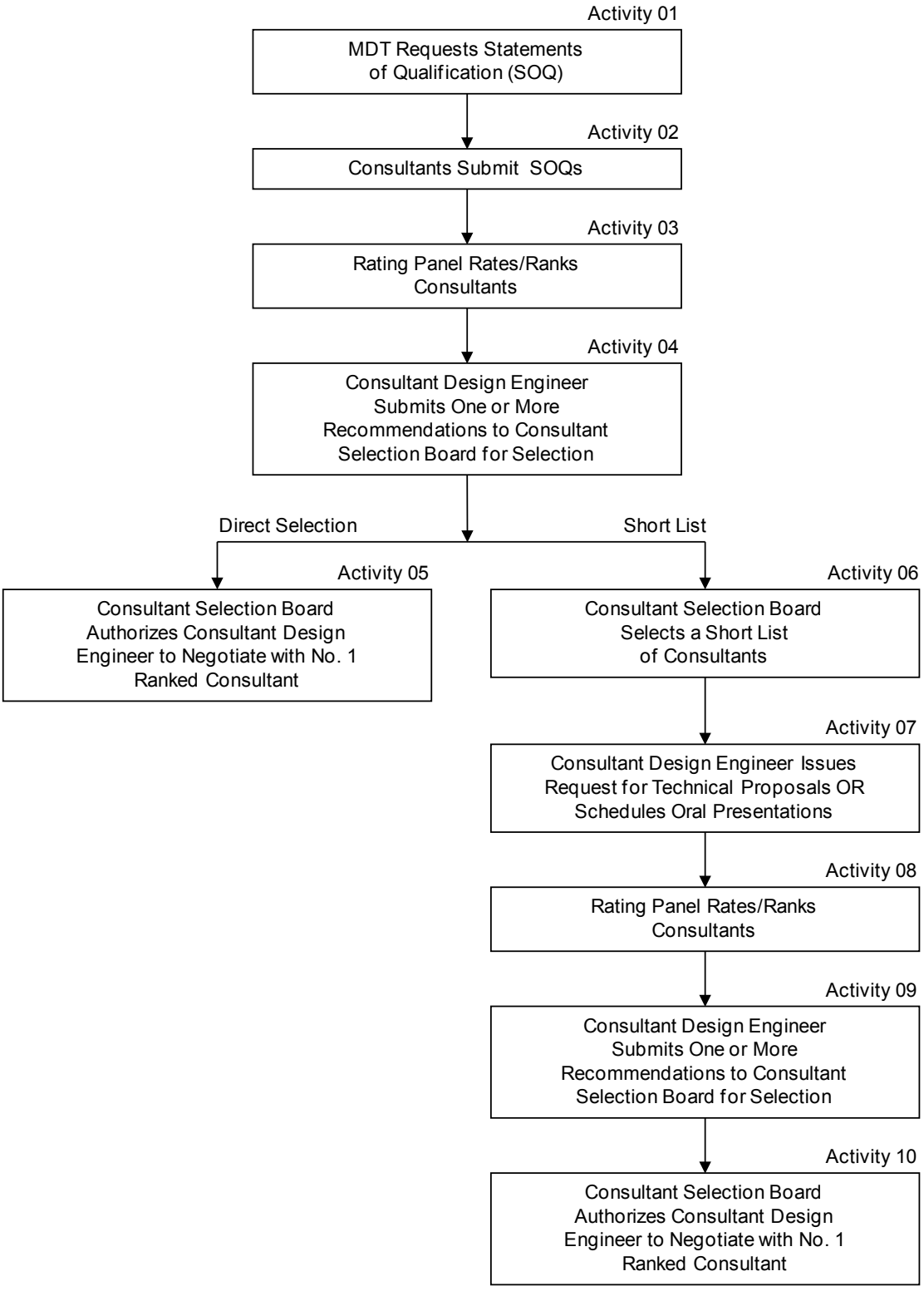


Figure 6.3-B — PROJECT-SPECIFIC PROCESS
(for a "Project," "Special Project" or "Term Contract")

6.3.3.4 Activity 03 — Rating Panel Rates/Ranks Consultants

The Consultant Design Engineer establishes a Rating Panel to review and evaluate each Consultant SOQ. See Section 6.3.1.6 for more information on the Rating Panel activities. The Consultant Design Bureau will distribute the SOQs.

6.3.3.5 Activity 04 — Consultant Design Engineer Presents to Selection Board

The Consultant Design Engineer presents the Rating Panel's ratings (including past performance) and recommendation to the Consultant Selection Board. See Section 6.3.1.7 for more information on the Board. For the project-specific process, the Consultant Selection Board can:

- select a Consultant directly (see Activity 05), or
- select a short-list of Consultants for further evaluation (see Activity 06 – Activity 10).

6.3.3.6 Activity 05 — Consultant Selection Board Authorizes Negotiations (Direct Selection)

The Consultant Selection Board may consider the Consultant Design Engineer's recommendations when selecting firms for the specific project. The Board selects, in order of preference, no less than three firms deemed to be the most highly qualified to provide the services required. The Board then authorizes the Consultant Design Engineer to begin negotiations. See Chapter 7 on contract negotiations.

6.3.3.7 Activity 06 — Consultant Selection Board Selects Short List

The Consultant Selection Board will establish a short list of Consultants for further evaluation. The number on the short list may vary between three and five firms; the typical number is three. On a case-by-case basis, the Board will choose to:

- solicit Technical Proposals from the short-listed firms, and/or
- invite the short-listed firms to make an oral presentation to MDT.

6.3.3.8 Activity 07 — Consultant Design Engineer Contacts Short-Listed Consultants

The Consultant Design Engineer will notify each short-listed Consultant of MDT's decision with information on the next step, which will be one or both of the following:

1. Technical Proposals. MDT will request that each Consultant present a detailed Technical Proposal. For example, MDT may frame the request to elicit a response to the following issues:

- What is the Consultant's understanding of the project?
- How will the Consultant fulfill the scope of services? What are the most significant challenges related to the project?
- What innovative ideas will the Consultant use in project implementation?
- What approach (i.e., the project work plan) will the Consultant use?
- How will the Consultant manage the project? How will the Consultant integrate quality control principles into project implementation?

The Consultant Design Engineer will determine the evaluation criteria based on the above items on a project-by-project basis.

2. Oral Presentations. The Consultant Design Engineer notifies each short-listed Consultant of the time, date and location for oral presentations. The notification will inform each Consultant of the time limit for the presentation, subdivided into a time for the Consultant presentation and a time for MDT questions. MDT does not usually restrict the content and format of the Consultant's portion of the oral presentation.

6.3.3.9 Activity 08 — Rating Panel Rates/Ranks Consultants

The Consultant Design Engineer typically designates the same Rating Panel membership as used for the evaluation of Consultant SOQs. The Rating Panel members assign a score to each Consultant for each evaluation criteria. See Section 6.3.1.6 for more information on the Rating Panel activities. The Rating Panel will tabulate the evaluation scores and recommend a selection to the Consultant Design Engineer.

6.3.3.10 Activity 09 — Submit Recommendation to Consultant Selection Board

The Consultant Design Engineer presents the Rating Panel's ratings and recommendations to the Consultant Selection Board for action.

6.3.3.11 Activity 10 — Consultant Selection Board Authorizes Negotiations

For a Project or Special Project, the Consultant Selection Board may consider the Consultant Design Engineer's recommendations when selecting firms. The Board selects, in order of preference, no less than three firms deemed to be the most highly qualified to provide the services required. The Board then authorizes the Consultant Design Engineer to begin negotiations. See Section 6.3.1.7 on the Board's activities. See Chapter 7 on contract negotiations.

For a Term Contract, the Board may consider the recommendation of the sponsoring functional unit with respect to the number of Consultants selected for the Term Contract. The overall objective is to select at least three firms for negotiations; the total of "three" could be reached by designating one or two "alternates" if negotiations with the "selected" firm(s) fail. For example, if the sponsoring functional unit recommends that only one Term Contract be executed, the Consultant Selection Board will select one firm and designate two alternate firms. If, in contrast, the sponsoring functional unit recommends that five firms be selected for negotiations towards a Term Contract, the Board will select five firms and may not designate any alternates.

Upon conclusion of the Board's actions, the Consultant Design Engineer negotiates and executes Term Contracts with the selected Consultants. The Consultant Design Engineer will assign a Consultant Project Engineer to manage the Term Contract. See Chapter 7 for contract negotiations. If fewer than three of the selected Consultants cannot perform the work, then the Consultant Design Engineer will begin negotiations with alternate Consultant(s).

6.3.4 Hybrid Process (for a "Project")

6.3.4.1 Description/Application

The hybrid process combines elements of the prequalification process for a Project (Figure 6.3-A) and the project-specific process for any type of Consultant project (Figure 6.3-B). Activities 01 through 05 of the hybrid process are identical to the prequalification process for a Project. At this point in the hybrid process, the Consultant Selection Board may choose to establish a short list for further evaluation. From this point, Activities 06 through 10 of the hybrid process are identical to Activities 06 through 10 of the project-specific process.

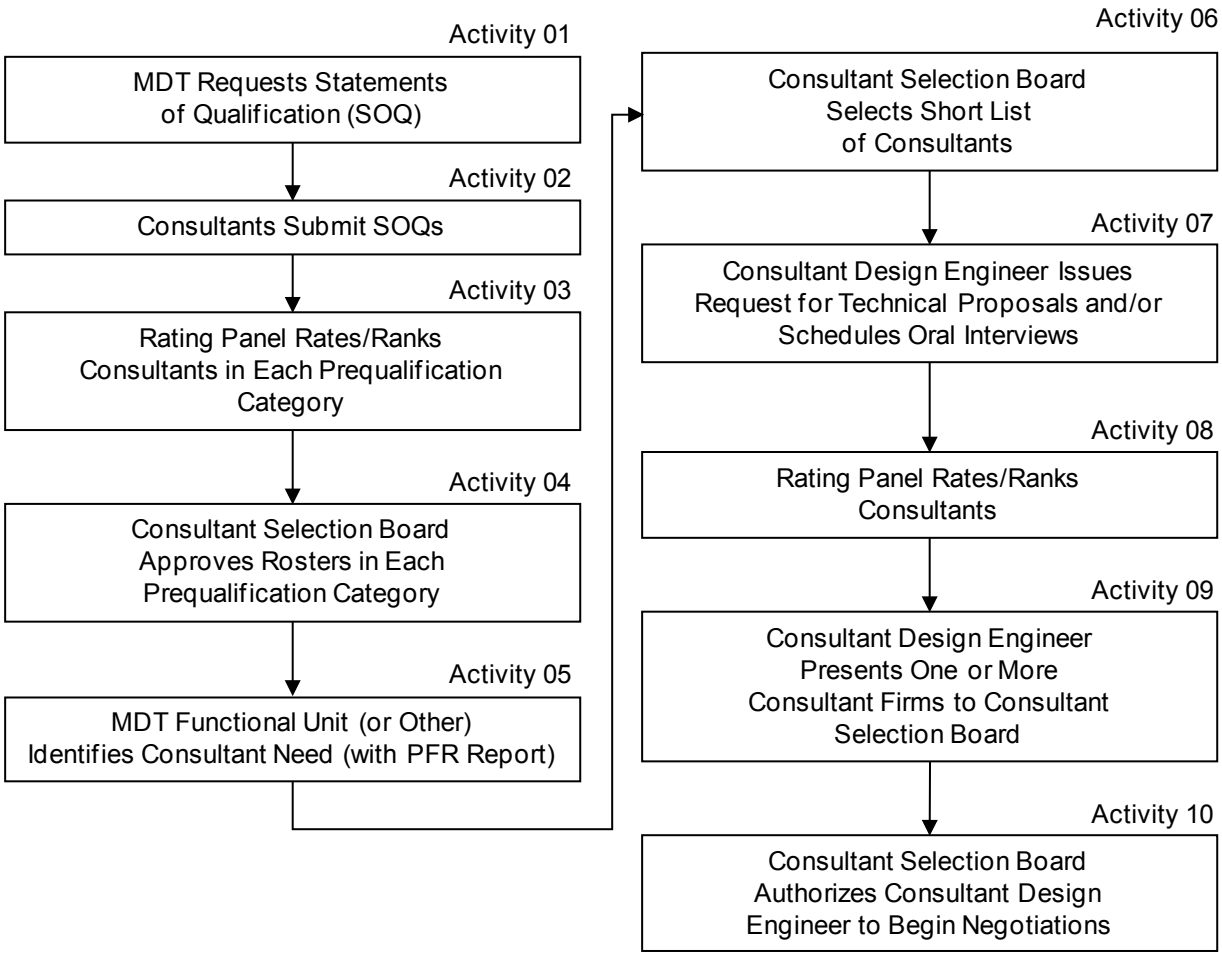
In rare cases, it may be appropriate to use the hybrid process for a Term Contract.

Figure 6.3-C presents the basic steps in the hybrid process. The following Sections elaborate on each activity within the process.

6.3.4.2 Activity 01 — Request SOQ

Once every two years (typically in March or April), the Consultant Design Bureau issues its Request for Statements of Qualification (SOQs) from Consultants interested in participating in MDT's prequalification process. In the "off" years, Consultants have the opportunity to update their SOQs if a firm's makeup or personnel has changed significantly from the original submission. Consultants not on the original roster will also have the opportunity to submit their SOQs in the off year.

As of the publication of this *Manual*, MDT has identified nine categories of service for which Consultants may become prequalified:



Note: Activities 01 through 05 occur every two years. Activities 06 through 10 occur when MDT makes a selection.

Figure 6.3-C — HYBRID PROCESS
(For a "Project")

- Comprehensive Roadway Design,
- Bridges and Structures,
- Geotechnical and Materials,
- Traffic and Safety Engineering,
- Hydraulics and Hydrology,
- Right-of-Way Appraisal and Acquisition,
- Environmental and Corridor Studies,
- Land Surveying, and
- Planning.

The Consultant Design Engineer determines the categories. Consultants may submit in one or more categories. Consultants must be prequalified to have an opportunity to perform services for any Project when the hybrid process is used. See Section 6.3.1.5 for more information on the Request for SOQs.

6.3.4.3 Activity 02 — Consultants Submit SOQs

Consultants submit their SOQs to the Consultant Design Engineer by the MDT deadline, which is approximately six weeks after the issuance of the Request for SOQs. The Consultant Design Bureau prepares the SOQs for distribution to the Rating Panels

6.3.4.4 Activity 03 — Rating Panel Rates/Ranks Consultants

The Consultant Design Engineer establishes a Rating Panel for each category of service to review and evaluate each Consultant SOQ. The ratings also include the Consultant's past performance. See Section 6.3.1.6 for more information on the Rating Panel activities. The Consultant Design Bureau will distribute the SOQs.

6.3.4.5 Activity 04 — Consultant Selection Board Approves Rosters

The Consultant Design Engineer presents the Rating Panels' ratings and recommendations to the Consultant Selection Board. The Board will establish a ranked roster in each of the prequalification categories of service, which is updated on a yearly basis. Federal regulations require that MDT include a minimum of three Consultants in each category of service.

See Section 6.3.1.7 for more information on the Consultant Selection Board.

6.3.4.6 Activity 05 — Identify Need for "Project"

The Bureau Chief (or designee) will identify the need for a "Project" and notify the Consultant Design Engineer. See Section 6.2.1. The Consultant Design Engineer will assign a CPE to manage the Project.

6.3.4.7 Activity 06 — Consultant Selection Board Selects Short List

The Consultant Selection Board will establish a short list of Consultants for further evaluation. The number on the short list may vary between three and five firms; the typical number is three. On a case-by-case basis, the Board will choose to:

- solicit Technical Proposals from the short-listed firms, and/or
- invite the short-listed firms to make an oral presentation to MDT.

6.3.4.8 Activity 07 — Consultant Design Engineer Contacts Short-Listed Consultants

The Consultant Design Engineer will notify each short-listed Consultant of MDT's decision with information on the next step, which will be one or both of the following:

1. Technical Proposals. MDT will request that each Consultant present a detailed Technical Proposal. For example, MDT may frame the request to elicit a response to the following issues:

    - What is the Consultant's understanding of the project?
    - How will the Consultant fulfill the scope of services? What are the most significant challenges related to the project?
    - What innovative ideas will the Consultant use in project implementation?
    - What approach (i.e., the project work plan) will the Consultant use?
    - How will the Consultant manage the project? How will the Consultant integrate quality control principles into project implementation?

    The Consultant Design Engineer will determine the evaluation criteria based on the above items on a project-by-project basis.

2. Oral Presentations. The Consultant Design Engineer notifies each short-listed Consultant of the time, date and location of oral presentations. The notification will inform each Consultant of the time limit for the presentation, subdivided into a time for the Consultant presentation and a time for MDT questions. MDT does not usually restrict the content and format of the Consultant's portion of the oral presentation.

6.3.4.9 Activity 08 — Rating Panel Rates/Ranks Consultants

The Consultant Design Engineer typically designates the same Rating Panel membership as used for the evaluation of Consultant SOQs. The ratings also include the Consultant's past performance. The Rating Panel members assign a score to each Consultant for each evaluation criteria. See Section 6.3.1.6 for more information on the Rating Panel activities. The

Rating Panel will tabulate the evaluation scores and recommend a selection to the Consultant Design Engineer.

6.3.4.10 Activity 09 — Submit Recommendation to Consultant Selection Board

The Consultant Design Engineer presents the Rating Panel's ratings and recommendations to the Consultant Selection Board for action.

6.3.4.11 Activity 10 — Consultant Selection Board Authorizes Negotiations

The Consultant Selection Board may consider the Consultant Design Engineer's recommendations when selecting firms. The Board selects, in order of preference, no less than three firms deemed to be the most highly qualified to provide the services required. The Board then authorizes the Consultant Design Engineer to begin negotiations. See Section 6.3.1.7 on the Board's activities. See Chapter 7 on contract negotiations.

6.3.5 Sole Source Process

Sole source (or non-competitive negotiations) may be used to obtain Consultant services when the selection is not feasible using the small contract or competitive negotiation procedures. See 23 CFR Part 172.5(a)(3). FHWA must approve a sole-source solicitation if Federal-aid funds are proposed. Sole-source negotiations may be used if:

- there is an emergency (or exigency) that does not permit the time necessary to conduct competitive negotiations (consult with FHWA before entering into negotiations);
- the work to be performed is such that it is available from only a single source*; or
- after solicitation, the competition to a single source is deemed inadequate.

* *Under Montana State Statutes (MCA 18-8-201), this is not an acceptable basis for a sole-source solicitation if the contract value exceeds $20,000.*

If one of the above conditions is met, the Consultant Selection Board can authorize the Consultant Design Engineer to negotiate with a single source to provide the Consultant services. The justification for using a single source is documented in the Consultant Selection Board's Minutes. Before negotiations begin with the selected Consultant (see Chapter 7), the Consultant Design Bureau must still develop an adequate scope of services, independent cost estimate, etc.; i.e., negotiations with a single source are the same as for a Consultant selected through a competitive process.

6.3.6 Small Contract Procedures

If the estimated cost of Consultant services is less than $20,000, and after receiving authorization from a member of the Director's Office, the Consultant Design Engineer has the authority to negotiate directly with a Consultant of his/her choosing after receiving approval and develop a contract. See MCA Section 18-8-212. The Consultant Design Engineer must conclude that the Consultant has the necessary qualifications, experience and resources to provide the services. All contract negotiations will follow the normal contract procedures as outlined in Chapter 7.

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Chapter 7
CONTRACT NEGOTIATIONS

7.1 GENERAL

7.1.1 Objective

The general objective of contract negotiations is to establish a project cost, scope and schedule that is fair and reasonable to both MDT and the selected Consultant. Negotiations should be conducted in good faith, recognizing that compromises may be necessary to achieve an equitable outcome to contract negotiations. The MDT negotiators must recognize the legitimate interests of the Consultant industry in recovering their costs and making a reasonable profit when providing services to the Department. Consultants must recognize the legitimate interests of the Department in receiving quality work at a fair, competitive and reasonable cost to accomplish the work program while maximizing the benefit from taxpayer dollars. A contract that is beneficial to both parties is the desired outcome of successful negotiations.

7.1.2 Legal Authority

7.1.2.1 State of Montana

MCA Section 18-8-205 stipulates in part that:

- Agencies shall negotiate a contract with the most qualified firm at a cost that is fair and reasonable.
- Agencies shall consider the value of the services to be provided in addition to the scope and complexity of the services.

The provisions of MCA Section 18-8-205 do not apply to the negotiation of contracts for projects that MDT has determined are part of the design-build contracting program authorized in MCA Section 60-2-137.

7.1.2.2 Federal Highway Administration

23 CFR Part 172 “Administration of Engineering and Design Related Service Contracts” does not directly address contract negotiations between State DOTs and Consultants. See Chapter 11 of this *Manual*.

7.1.3 Types of Contracts

State DOTs and the Consultant industry have identified the basic types of contracts that are used to establish the basis for Consultant payment. The following describes the contract types used by MDT:

1. Cost Plus Fixed Fee. An agreement in which all cost factors except fee are actual cost. The fixed fee is a set dollar amount in the agreement. Through the negotiations process, MDT establishes a ceiling or upper limit on a cost-plus-fixed-fee contract. Almost all MDT contracts with Consultants are based on this type of contract reimbursement.

2. Cost Per Unit of Work. An agreement based on a unit rate of work developed for billing purposes, including a firm's direct labor cost, indirect cost rate (accepted or negotiated), and negotiated fee. The "unit" may be an hour, drilling a hole for subsurface investigations, testing of materials, etc. This type of reimbursement may be appropriate for a Consultant contract or contractor-type service (e.g., geotechnical drilling). MDT may consider this contract type to be advantageous when the total magnitude of services needed are uncertain, but the character of each unit of service is discrete and repetitive, and a unit cost can be accurately determined.

3. Lump Sum. An agreement where the method of payment for delivery of goods and services is one set amount that includes direct costs, indirect costs and fee with no adjustments. Once the lump-sum amount is agreed upon, the services or goods must be provided regardless of the actual cost to the Consultant. MDT rarely uses this type of cost-reimbursement contract.

7.1.4 Time Line

Chapter 6 discusses the selection of Consultants for a "Project" or "Special Project" using the various types of solicitation procedures. Each of these processes ends with the Consultant Selection Board authorizing the Consultant Design Engineer to begin negotiations. The following summarizes the MDT time line for completing the contract negotiations process:

- The scoping meeting is targeted to occur within three weeks of the Consultant Selection Board Meeting.
- The Consultant will submit the scope of services and cost proposal within three weeks of the scoping meeting.
- Negotiations will be concluded within six weeks of the scoping meeting.
- If negotiations fail, then MDT moves to the next Consultant.

7.2 PROJECTS AND SPECIAL PROJECTS

Section 7.2 discusses contract negotiations for "Projects" and "Special Projects." See Section 6.3.2.8 for a discussion on the role of the Consultant Selection Board.

7.2.1 Scoping Meeting

7.2.1.1 Scheduling

The Consultant Project Engineer (CPE) notifies the Consultant and schedules a scoping meeting to initiate the negotiation process, which will occur within two weeks of the date of the Board's authorization to begin negotiations. As appropriate, the CPE will invite other MDT representatives to the meeting (e.g., functional unit, District, local governments). In some cases, the scoping meeting is not required (e.g., for Phase II of a Consultant project).

The CPE will prepare an agenda for the meeting and submit the agenda to all attendees. Figure 7.2-A presents a sample agenda. The CPE may coordinate with the Consultant to add other items to the agenda.

7.2.1.2 Purpose

The CPE leads the scoping meeting and serves as the moderator. The overall purpose of the meeting is for MDT to communicate the project objectives to the selected Consultant to enable the Consultant to prepare its cost proposal. The scoping meeting provides a forum for MDT and the Consultant to engage in discussion, ask questions, etc., to better define the nature of the project, special problems, duration, division of responsibilities between MDT and Consultant, lines of communication, etc. As necessary, MDT will also communicate to the Consultant:

- contractual requirements (e.g., insurance, certifications, licenses);
- anticipated project schedule;
- use of the Consultant Proposal Estimate Spreadsheet for the cost proposal;
- the necessary support for the Consultant's cost proposal (e.g., current indirect cost rate); and
- invoicing MDT.

The Consultant should provide to MDT at the scoping meeting its:

- current indirect cost rate or approved alternative (see Section 7.2.2.4 and Section 11.2),
- proof of errors and omissions insurance,

Scoping Meeting
(Agenda)

- **Introduce the meeting**
- **Initiate introductions**
- **Housekeeping Items**
    - **Consultant hands out sign-up sheet**
    - **Consultant takes meeting minutes**
    - **Identify the roles:**
        - **MDT review personnel – charged with reviewing & commenting on work submitted by the Consultant**
        - **Consultant Project Engineer – charged with:**
            - **Administering the contract**
            - **Keeping the project on schedule**
            - **Keeping the project on scope**
            - **Keeping the project on budget**
            - **Acting as liaison between the Consultant and the Department**
        - **Consultant – charged with:**
            - **All contact with the Department should be initiated through the Consultant Project Engineer. At the discretion of the Consultant Project Engineer, the Consultant may be directed to contact MDT review personnel directly.**
            - **Inform the Consultant Project Engineer if MDT personnel have initiated direct contact with the Consultant.**
            - **All correspondence should be routed to the Consultant Project Engineer.**
            - **If, during the project, determine that a scheduled submittal date will be missed, inform the Consultant Project Engineer ASAP**
    - **Review documents related to submittal of the Consultant's proposal and administration of contract (should have this information):**
        - **Sample Billing Invoice**
        - **Consultant Estimate Shell**
        - **Consultant Override Document**
    - **Meeting Minutes – Consultant to keep track of and provide within 7 days**
    - **Cost Proposal – inform Consultant to provide within 30 days**
    - **Project Completion date**
- **Questions**
- **The End**

Figure 7.2-A — SCOPING MEETING AGENDA

- proof of worker's compensation insurance,
- proof of firm's registration with the Secretary of State to do business in Montana, and
- proof of Certificate of Authorization with the Board of Professional Engineers and Land Surveyors when required.

If these are not available at the scoping meeting, the Consultant must submit these items with its cost proposal.

7.2.1.3 Meeting Minutes

The Consultant is responsible for submitting the minutes of the scoping meeting to the CPE within seven days after the meeting.

7.2.1.4 Reasonable Costs

In accordance with 48 CFR 31.205-32; in the event that an amicable agreement is reached, the Consultant is allowed to bill the Department for reasonable costs associated with the scoping of the contract. These costs are permissible even if they occur prior to executing a contract.

7.2.2 Consultant's Cost Proposal

This Section discusses the responsibilities of the Consultant for each element of its cost proposal. Section 7.2.3 discusses the CPE's response to the cost proposal.

7.2.2.1 Project Scope of Services

The project scope of services is a major factor that determines the cost of Consultant services, and it forms the basis for the Consultant's labor-hour estimate. The scope defines the nature and volume of work to be performed, and it provides a written documentation of the understanding between MDT and the Consultant on the work needed to complete the project. A well-written scope establishes the:

- tasks and subtasks (i.e., work activities) to be performed;
- materials to be delivered;
- number and type of meetings to be attended;
- equipment that will be used;
- standards, policies and guidelines that will be followed; and
- responsibilities of both the Consultant and MDT.

The length and complexity of the project scope of services discussion will depend on the nature of the project.

7.2.2.2 Project Schedule

The project schedule is a negotiated item between MDT and the Consultant. However, MDT may identify the desired project completion date at the scoping meeting. The Consultant's cost proposal must include a project schedule illustrating:

- the tasks and subtasks identified in the project scope of services,
- the duration of each task/subtask, and
- the completion date for each task/subtask.

The Consultant should use the activities listed in the Consultant Proposal Estimate Spreadsheet to identify the project tasks and subtasks to present in the project schedule. The MDT website presents a schedule template that the Consultant must use to develop and submit its project schedule.

7.2.2.3 Project Labor-Hour Estimate

The basis for an accurate, meaningful labor-hour estimate is a well-developed, comprehensive project scope of services. This should be combined with historical staffing requirements for past projects with similar characteristics. In addition, the Consultant's labor-hour estimate should reflect:

- a reasonable distribution of work among the various levels of proposed staffing positions (i.e., the less complicated the task, the lower the level of staffing proposed); and

- the use of subconsultants/independent contractors.

The Consultant must use the Consultant Proposal Estimate Spreadsheet, modified as necessary to fit a specific project, to present its labor-hour estimate for the project.

7.2.2.4 Project Cost Estimate

The cost estimate (including supporting data) must be segregated into the following cost elements:

1. Direct Labor Cost. These must be itemized by staff position and actual hourly rate. MDT does not allow the use of "average billing rates" based on staff positions; i.e., the proposed rates must be the actual hourly rate for the specific staff personnel. For Consultant projects that will be active for two or more years, MDT may accept built-in pay escalators, if reasonable. MDT reserves the right to terminate contract negotiations when unreasonable rate charges are proposed.

2. Indirect Cost Rate. Section 11.2 discusses MDT policies and procedures for indirect cost rates. All new projects require an accepted indirect cost rate. The Consultant should provide its proposed indirect cost rate to MDT either at the scoping meeting or

when submitting its cost proposal. If the Consultant has a current, MDT-accepted indirect cost rate, the CPE will send this information to the master contract file.

3. Direct Expenses. These include expenses directly related to project implementation (e.g., travel, communications, lodging, meals). These must be itemized by type, quantity and rate and must be the actual firm rates. All direct expenses must not exceed the Federal limits.

4. Fixed Fee. The Consultant will propose a fixed fee for the project. For estimating purposes, the Consultant can base its fixed fee on a percentage applied to direct labor costs plus the application of its indirect cost rate to direct labor.

5. Subconsultants/Independent Contractors. The cost estimate must present the same information, detail and segregation for any subconsultants and/or independent contractors proposed for the project as used for the prime Consultant. For indirect cost rate requirements, see Section 11.2. After executing the subconsultant and/or independent contractor agreement(s), the MDT Standard Contract (see Chapter 12) requires that (prior to commencing work) the prime Consultant submit the agreement(s) to MDT within five business days.

   The prime Consultant must be responsible for at least 50% of the estimated total labor hours for the project. If less than 50%, approval from the CPE is required.

7.2.3 MDT Review of Cost Proposal/Negotiations

This Section provides guidance to CPEs on the review of the Consultant's cost proposal and the negotiation process. Although the various components are discussed individually, the negotiation process must be approached from an overall perspective. Scope of services, schedule, man-hours and costs are all interrelated. Adjusting any one of these will likely impact one or more of the others.

7.2.3.1 CPE Independent Cost Estimate

After the scoping meeting but before reviewing the Consultant's cost proposal, the CPE will develop an independent cost estimate for the project. The CPE will use the MDT Cost Estimate Spreadsheet and will:

- estimate the man-hours for each work activity for each employee classification,
- estimate the direct expenses,
- apply the MDT standard direct labor rates,
- apply the Consultant's appropriate indirect cost rate, and
- apply a fixed fee within the accepted MDT range as judged appropriate for the project.

7.2.3.2 Indirect Cost Rate

Preferably, the Consultant will have provided its supporting data for its indirect cost rate at the scoping meeting, or the Consultant will have an accepted rate on file with MDT. Otherwise, the supporting data must be submitted with the cost proposal. See Section 11.2 for a detailed discussion on MDT procedures for reviewing indirect cost rates.

7.2.3.3 Project Scope of Services

The CPE will review the Consultant's project scope of services for completeness, accuracy, logic, etc. The final negotiated scope should be tailored to ensure a mutual understanding of the project. Each task and subtask should be discussed to determine how it will be accomplished, the nature of the deliverable and its format. If the Consultant's understanding does not agree with that of the Department, the Consultant and MDT should discuss the issues to identify a mutual understanding of the services to be accomplished, the method by which it will be accomplished, and the nature of the final product. Either party to the negotiations should feel free to request written confirmation on any modification to the scope to reflect the agreed-to terms.

7.2.3.4 Project Schedule

The CPE will evaluate the Consultant's project schedule to determine if it will allow the Consultant to meet the project completion date. For a "Project," this is accomplished through the use of OPX2. Section 4.1.1 discusses in detail the OPX2 process to develop a project schedule that is agreeable to all parties.

7.2.3.5 Project Labor-Hours

The basis for an accurate labor-hour estimate is a well-defined scope of services. With such a basis, a series of task and subtasks may be readily identified as staffing elements. Those elements should be used for both MDT and Consultant estimates for ease of reconciliation.

The CPE ensures that the Consultant's proposed staff is reasonable for the specific project. It is also critical to determine if a reasonable distribution of work among various levels of staff is proposed to ensure the most economical staffing commensurate with the complexity of the project. The Consultant and Department's labor-hour estimates should be compared and the differences evaluated. As necessary, the CPE will conduct discussions with the Consultant to resolve differences between MDT and Consultant labor-hour estimates.

Each project must be evaluated individually to determine a fair estimate of required staff hours. The basis for the estimate should be the specific requirements for the project under consideration together with a history of actual staff requirements for past projects with similar characteristics.

Evaluating the Consultant's proposed labor-hours may be the most subjective element of the negotiation process. MDT expects an efficient allocation of manpower resources. However, this does not eliminate honest differences of opinion between the CPE and Consultant on the labor-hours needed to fulfill the scope of services. It may require considerable negotiations between the two parties on scope and level of effort to identify a mutually agreeable balance. A good-faith posture from both the CPE and Consultant is an important element in successful negotiations on labor-hours.

7.2.3.6 Project Cost Estimate

In general, the Department expects the Consultant to operate in the most economical and efficient means as practical. The following briefly discusses the CPE's review of the individual elements of the Consultant's cost proposal:

1. Direct Labor Rates. The CPE should compare the Consultant's proposed hourly rates with comparable prevailing rates in the Consulting industry for each employee classification. In addition, the CPE should judge the reasonableness of the association between each employee's rate and the work that the employee will perform on the project. For example, are senior-level staff performing less complex tasks on the project?

   Based on the project circumstances, especially the project schedule, MDT will consider paying a premium on overtime work by Consultant employees. The Consultant Design Engineer must approve in advance the use of premium overtime in writing.

   When determined to be in the best interest of the Department, provide written authorization for the Consultant to use overtime in accordance with its contract. Approval to use overtime will not increase the project budget.

2. Direct Expenses. The CPE should evaluate each proposed direct expense considering:

   - Is the item required to fulfill the project scope of services?
   - Is the quantity of the item required to fulfill the project scope of services?
   - Where applicable, does the cost per unit for the item comply with MDT limits?
   - For items where MDT has not established rate limits, does the cost per unit for the item appear to be reasonable?

   The Consultant must bill the actual costs for meals and lodging not to exceed the maximum per diem rate as allowed by the Federal limits.

3. Fixed Fee. Fixed fee is an amount typically estimated based on a percentage of direct labor costs plus indirect costs. The CPE will make the fixed-fee determination on a project-by-project basis considering:

- the degree of risk to the Consultant,
- relative difficulty of work,
- size of project,
- duration of contract,
- level of MDT involvement in project, and
- use of subconsultants.

The Consultant Design Engineer must approve any fixed fee that is based on an estimate that exceeds 12% of the estimated direct labor costs plus estimated indirect costs.

4. Subconsultants/Independent Contractors. The prime Consultant must be responsible for at least 50% of the estimated total labor hours for the project. If less than 50%, approval from the CPE is required. The CPE will evaluate the various elements of the subconsultant's and/or independent contractor's cost estimate in the same manner as for the prime Consultant.

7.2.3.7 Internal Audit Review of Cost Proposal

At the discretion of the CPE, the CPE may submit the Consultant's cost proposal to the Internal Audit Unit for review. For example, Internal Audit may compare the proposed direct expenses to indirect cost rate for allowability.

7.2.4 Contract Execution Process

Once the CPE and Consultant have completed contract negotiations and agreed to any changes in the Consultant's cost proposal, this Section discusses the process that leads to contract execution.

7.2.4.1 Approval of Cost Proposal

The CPE will prepare the Contract Funding Approval Memo stating the outcome of the contract negotiations and requesting approval, which will satisfy 48 CFR. The memorandum will be signed by the Consultant Plans Engineer and will be addressed to the Preconstruction Engineer through the Consultant Design Engineer. If in agreement, the Preconstruction Engineer will approve the scope and cost of the project. This concludes the negotiation process and initiates the contract execution process.

7.2.4.2 Contract Preparation

With approval from the Preconstruction Engineer, the CPE prepares and processes the contract. See Section 4.3.3 for the internal MDT procedures. MDT's objective is that the

contract will be executed within two weeks after receiving authorization from the Preconstruction Engineer.

MDT, in coordination with the Montana Chapter of ACEC, has developed a standard contract for Consultant projects. Occasionally, the standard contract does not fit well with the project-specific information and will be modified accordingly. The CPE will modify the standard contract to incorporate the necessary project-specific information and to amend language in the standard contract if warranted. The project-specific information for the contract includes:

- date of agreement,
- project scope of services,
- project schedule (including beginning and completion dates), and
- contract amount.

See Chapter 12 for more discussion on contract provisions.

7.2.4.3 Signatures

Typically, two original contracts will be prepared. Contract execution requires a review and signature by the following (in the order listed):

- Legal Services
- Civil Rights
- Consultant
- Director (or designee)

7.2.4.4 Distribution

The CPE will distribute one original executed contract to the Consultant, one original to the master contract file in the Consultant Design Bureau and copies to other parties, as appropriate.

7.2.5 Unsuccessful Negotiations

If MDT and the Consultant fail to successfully complete contract negotiations, the Consultant Design Engineer will terminate negotiations. MDT will then initiate contract negotiations with the next selected Consultant (i.e., the next ranked firm).

The decision to terminate negotiations is a business decision made by MDT. It should not result in a negative view of the Consultant, nor will this impact the Consultant's opportunity for selection on future projects.

7.2.6 Contract Amendments

See Section 8.3.6 for MDT policies and procedures for Contract Amendments.

7.3 TERM CONTRACTS/TERM ASSIGNMENTS

Section 7.3 discusses contract negotiations for Term Contracts and Term Assignments. As discussed in Section 6.3.2.8, the Consultant Selection Board selects the number of Consultants and contract ceilings.

7.3.1 Term Contracts

7.3.1.1 Objective

The objective of a Term Contract is to establish contractually the basic parameters of agreement between MDT and the Consultant that will uniformly apply to any future Term Assignments. This enables the Department to quickly procure needed services to meet future project development needs. The CPE role is to develop the contract and to provide assistance to the Functional Manager in contract administration.

7.3.1.2 Consultant Information

As discussed in Chapter 6, the Consultant Selection Board will, at the end of the Consultant selection process for Term Contracts, authorize the Consultant Design Engineer to initiate negotiations with one or more Consultants. Each Consultant selected for a term contract, will provide the CPE and Functional Manager (FM) with the following:

1. Direct Labor Rates. These must be itemized by staff position and actual hourly rate. MDT does not allow the use of "average billing rates" based on staff positions; i.e., the proposed rates must be the actual hourly rate for the specific staff personnel. For Consultant Term Contracts that will be active for more than two years, MDT may accept built-in pay escalators, if reasonable. MDT reserves the right to terminate contract negotiations when unreasonable rate charges are proposed.

2. Indirect Cost Rate. Section 11.2 discusses MDT policies and procedures for indirect cost rates. All new Term Contracts require an accepted indirect cost rate. If the Consultant has a current, MDT-accepted indirect cost rate, the CPE will send this information to the master contract file.

3. Direct Expenses. These are known expenses anticipated for the Term Assignments directly related to project implementation (e.g., travel, communications, lodging, meals). These must be itemized by type and rate and must be the actual firm rates. All direct expenses must not exceed the Federal limits.

4. Fixed Fee (FF). The Consultant will propose a fixed fee for the Term Contract. For estimating purposes, the Consultant can base its fixed fee on a percentage applied to direct labor costs plus the application of its indirect cost rate to direct labor.

5. Subconsultants/Independent Contractors. The Consultant's submittal must present the same information, detail and segregation for any subconsultants and/or independent contractors proposed for the project as used for the prime Consultant. For indirect cost rate requirements, see Section 11.2. After executing the subconsultant and/or independent contractor agreement(s), the MDT Standard Contract (see Chapter 12) requires that the prime Consultant submit the agreement(s) to MDT (prior to commencing work) within five business days.

6. Insurance/Registration. The Consultant must submit its:

   - proof of errors and omissions insurance,
   - proof of worker's compensation insurance, and
   - proof of firm's registration with the Secretary of State to do business in Montana.

7.3.1.3 MDT Review of Consultant Information

The following provides guidance to CPEs and FMs on the review of the Consultant's submitted information for the Term Contract:

1. Direct Labor Rates. The CPE and FM should compare the Consultant's proposed hourly rates with comparable prevailing rates in the Consulting industry for each employee classification.

2. Indirect Cost Rate. All new projects require an accepted indirect cost rate. If the Consultant does not have a current MDT indirect cost rate, the CPE will submit the indirect cost rate and any supporting documentation to the Internal Audit Unit, which is signed by the Consultant Plans Engineer. The Consultant should provide its indirect cost rate calculation to MDT as soon as possible but no later than when submitting the cost proposal. The CPE will request that the Internal Audit Unit provide its recommendation on the acceptance or rejection of the Consultant's indirect cost rate. Upon receipt of the Unit's recommendations, the Administrative Assistant will distribute the reply to the Consultant Design Engineer, the Consultant Plans Engineer, the applicable CPE, the FM, the master contract file and the indirect cost rate audit file. The Administrative Assistant will update the Consultant Information System (CIS) within five working days. Sections 11.1 and 11.2 discuss MDT policies on indirect cost rates in detail.

3. Direct Expenses. The CPE should evaluate each proposed direct expense considering:

   - Is the item required to fulfill the project scope of services?
   - Where applicable, does the cost per unit for the item comply with MDT limits?
   - For items where MDT has not established rate limits, does the cost per unit for the item appear to be reasonable?

- The Consultant must bill the actual costs for meals and lodging not to exceed the maximum per diem rate as allowed by the Federal limits.

4. Fixed Fee. Fixed fee is an amount typically estimated based on a percentage of direct labor costs plus indirect costs. The CPE and FM will make the fixed-fee determination on a project-by-project basis considering:

   - the degree of risk to the Consultant,
   - relative difficulty of work,
   - size of contract, and
   - use of subconsultants.

   The Consultant Design Engineer must approve any fixed fee that is based on an estimate that exceeds 12%.

5. Subconsultants/Independent Contractors. The CPE will evaluate the various elements of the subconsultant's and/or independent contractor's cost estimate in the same manner as for the prime Consultant.

7.3.1.4 Contract Execution Process

Once the CPE/FM and Consultant have completed contract negotiations and agreed to any changes in the Consultant's information, the following discusses the process that leads to the execution of the Term Contract:

1. Contract Preparation. The CPE prepares and processes the Term Contract. See Section 4.3.3 for the internal MDT procedures. MDT's objective is that the contract will be executed within six weeks after the Consultant Selection Board meeting. MDT, in coordination with the Montana Chapter of ACEC, has developed a standard contract for Consultant projects. However, for Term Contracts, the MDT standard contract requires considerable modification, which the CPE will perform. See Chapter 12 for more discussion on contract provisions.

2. Signatures. Typically, two original contracts will be prepared. Contract execution requires a review and signature by the following (in the order listed):

   - Legal Services
   - Civil Rights
   - Consultant
   - Director (or designee)

3. Distribution. The CPE will distribute one original executed Term Contract to the Consultant, one original to the master contract file in the Consultant Design Bureau, one copy to the Functional Manager and copies to other parties, as appropriate.

7.3.2 Term Assignments

The Functional Manager will administer individual Term Assignments under the Term Contract as work is needed, with assistance from the CPE as necessary.

7.3.2.1 Initiation

The FM responsible for a Term Contract must first justify the need for a Term Assignment to provide the necessary technical support services for a MDT-designed project. The next step depends upon whether the services are engineering, surveying or architectural (ESA) or non-ESA:

1. ESA. For ESA Term Assignments, the FM will select a Term Contract Consultant for the required technical support services based on factors applicable to the work task.

2. Non-ESA. For Term Assignments that are predominately non-ESA, cost must be included as an evaluation factor. All Consultants under Term Contract for that discipline for non-ESA services must be provided the opportunity to submit cost proposals.

For both ESA and non-ESA Term Assignments, the FM will contact the selected Consultant(s) and provide/request the following:

- Provide an adequate description of the desired scope of services (see Section 7.3.2.2). If the desired work is complex, then a scoping meeting may be required (see Section 7.2.1).

- Provide the anticipated start and end date of the Term Assignment.

- Request a cost proposal from the Consultant.

All requests for cost proposals will be made in writing and copied to the Consultant Design Engineer. If the request is made on a matter of exigency and/or the request is verbal, the FM will provide to the Consultant Design Engineer correspondence documenting the request.

The remainder of Section 7.3.2 provides the FM and Consultant with guidance on negotiations for a Term Assignment.

7.3.2.2 Scope of Services

The FM will prepare the scope of services for a Term Assignment. This is a major factor that determines the cost of Consultant services, and it forms the basis for the Consultant's labor-hour estimate. The scope defines the nature and volume of work to be performed, and it provides a written documentation of the understanding between MDT and the Consultant on the work needed to complete the Assignment. A well-written scope establishes the:

- tasks and subtasks (i.e., work activities) to be performed;
- materials to be delivered;
- number and type of meetings to be attended;
- equipment that will be used;
- standards, policies and guidelines that will be followed; and
- responsibilities of both the Consultant and MDT.

The length and complexity of the scope of services discussion will depend on the nature of the Term Assignment.

7.3.2.3 Labor-Hour Estimate (Consultant's)

The basis for an accurate, meaningful labor-hour estimate is a well-developed, comprehensive scope of services. This should be combined with historical staffing requirements for previous work with similar characteristics. In addition, the Consultant's labor-hour estimate should reflect:

- a reasonable distribution of work among the various levels of proposed staffing positions (i.e., the less complicated the task, the lower the level of staffing proposed); and

- the use of subconsultants/independent contractors.

The Consultant must use the Consultant Proposal Estimate Spreadsheet, modified as necessary to fit a specific Term Assignment, to present its labor-hour estimate and must use the labor hourly rates established in the Term Contract.

If subconsultants and/or independent contractors are used, the prime Consultant must be responsible for at least 50% of the estimated total labor hours for the project. If less than 50%, approval from the CPE is required.

7.3.2.4 Direct Expenses (Consultant's Estimate)

These include expenses directly related to project implementation (e.g., travel, communications, lodging, meals). These must be itemized by type, quantity and rate and must correspond to the rates established in the Term Contract. All direct expenses related to travel must not exceed the Federal limits.

7.3.2.5 Subconsultants/Independent Contractors (Consultant's Proposal)

The cost estimate must present the same information, detail and segregation for any subconsultants and/or independent contractors proposed for the Term Assignment as used for the prime Consultant. The MDT Standard Contract (see Chapter 12) requires that the prime Consultant submit its agreement(s) with the subconsultant and/or independent contractor within five business days of executing the subconsultant and/or independent contractor contract.

7.3.2.6 Independent Cost Estimate (Functional Manager)

The FM will develop an independent cost estimate for the Term Assignment, using the MDT Cost Estimate Spreadsheet or equivalent, and will:

- estimate the man-hours for each work activity for each employee classification,
- estimate the quantities for direct expenses and apply the rates in the Term Contract,
- apply the direct labor rates in the Term Contract,
- apply the indirect cost rate in the Term Contract, and
- apply the fixed-fee in the Term Contract.

7.3.2.7 Labor-Hours (MDT Review)

The FM ensures that the Consultant's proposed staff is reasonable for the specific Term Assignment. It is also critical to determine if a reasonable distribution of work among various levels of staff is proposed to ensure the most economical staffing commensurate with the complexity of the work. The Consultant and Department's labor-hour estimates should be compared and the differences evaluated. As necessary, the FM will conduct discussions with the Consultant to resolve differences between MDT and Consultant labor-hour estimates.

Each Term Assignment must be evaluated individually to determine a fair estimate of required staff hours. The basis for the estimate should be the specific requirements for the Assignment under consideration together with a history of actual staff requirements for previous work with similar characteristics.

Evaluating the Consultant's proposed labor-hours may be the most subjective element of the negotiation process. MDT expects an efficient allocation of manpower resources. However, this does not eliminate honest differences of opinion between the FM and Consultant on the labor-hours needed to fulfill the scope of services. It may require considerable negotiations between the two parties on scope and level of effort to identify a mutually agreeable balance. A good-faith posture from both the FM and Consultant is an important element in successful negotiations on labor-hours.

7.3.2.8 Direct Expenses (MDT Review)

The FM should evaluate each proposed direct expense considering:

- Is the item required to fulfill the scope of services?
- Is the quantity of the item required to fulfill the scope of services?

The Consultant must bill the actual costs for meals and lodging not to exceed the maximum per diem rate as allowed by the Federal limits.

7.3.2.9 Subconsultants/Independent Contractors (MDT Review)

The prime Consultant must be responsible for at least 50% of the estimated total labor hours for the Term Assignment. If less than 50% approval from the CPE is required. The CPE will evaluate the various elements of the subconsultants and/or independent contractor's cost estimate in the same manner as for the prime Consultant.

7.3.2.10 Negotiations

The FM will negotiate the Term Assignment schedule, scope and cost with the Consultant. The CPE will assist with negotiations if needed.

After reaching an amicable agreement for schedule, scope and cost, the FM will request written approval from the Consultant Design Engineer. The Memorandum will include both a copy of the Consultant's proposal, a copy of the FM's rating form for non-ESA services, and a copy of the FM's independent cost estimate. Approval is required for both Term Assignments and Term Assignment amendments.

7.3.2.11 Unsuccessful Negotiations

If the FM is having difficulty negotiating the Term Assignment, the CPE will provide assistance. If MDT and the Consultant fail to successfully complete Term Assignment negotiations, the FM will notify the CDE in writing. The CDE will then notify the Consultant that contract negotiations have been terminated. The FM may then request a cost proposal from another Consultant under a current Term Contract and begin negotiations with that Consultant.

The decision to terminate negotiations is a business decision made by MDT. It should not result in a negative view of the Consultant, nor will this impact the Consultant's opportunity for selection on future Term Assignments.

7.3.2.12 Notice to Proceed

Upon receiving approval from the Consultant Design Engineer, the FM will issue a written Notice to Proceed using the standard template to the Consultant and copy the Consultant Design Engineer and Fiscal Officer.

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Chapter 8
CONSULTANT PROJECT ADMINISTRATION

Chapter 8 presents MDT's policies and procedures on the administration of a Consultant project after the Notice to Proceed is issued.

8.1 "PROJECT" AND "SPECIAL PROJECT" PROTOCOL

8.1.1 Consultant Project Engineer (CPE) Role

8.1.1.1 General

On a Project or a Special Project, the CPE serves as the central point of contact for all project activities. The CPE provides administrative and engineering oversight during project development.

8.1.1.2 Contract and Administrative Issues

For contract-related and administrative-related issues, the responsibilities of the CPE include (but are not limited to):

- processing all Consultant invoices and monthly progress reports;
- monitoring the project schedule, including coordinating with the Engineering Information Services Section on monitoring OPX2 (see Section 4.1.1);
- monitoring the project scope and budget;
- providing written authorization for the Consultant to use overtime in accordance with the contract;
- monitoring the qualifications, assignments, on-the-job performance, etc., of the Consultant's project staff;
- scheduling and attending project meetings;
- coordinating design work between the Consultant and MDT;
- coordinating with other MDT units to elicit their involvement in the project (see Section 8.1.2);
- signing all routine project-related MDT memoranda that is generated in Consultant Design;

- addressing contract issues such as insurance, Disadvantaged Business Enterprise (DBE) requirements, agreements between MDT and other entities, compliance with the indirect cost rate, subcontracting, etc., and coordinating with other MDT units as needed;
- preparing and negotiating Contract Amendments;
- coordinating efforts to address any project-related problems (e.g., audit issues, errors and omissions);
- implementing project closure;
- preparing Consultant performance evaluations; and
- ensuring that all necessary project documents, files, correspondence, etc., are incorporated into the appropriate MDT files (e.g., MDT Document Management System, master project file, master contract file). See Section 4.4.

As appropriate, the CPE will inform the Consultant Plans Engineer and Consultant Design Engineer on issues related to the administration of individual Consultant projects.

8.1.1.3 Project Coordination and Communication Protocol

Effective project implementation requires proper coordination and communication among the several parties involved in a Consultant project. In addition to the CPE and Consultant, these parties could include:

- one or more MDT Headquarters units (e.g., Utilities Section, Right-of-Way Bureau, Bridge Bureau, Environmental Services Bureau, Geotechnical Section);
- MDT District Offices;
- other Montana State agencies (e.g., Fish, Wildlife and Parks, Department of Natural Resources and Conservation, Department of Environmental Quality);
- Federal agencies (FHWA, Fish and Wildlife Service, US Army Corps of Engineers, etc.);
- Tribal governments;
- local agencies; and
- the general public.

Chapter 3 discusses the specific items of coordination between the Consultant Design Bureau and the various parties for the implementation of a Consultant project. In general, the CPE has the discretion to establish the communication protocol between the Consultant and all other parties involved with the project. This will be determined on a case-by-case and a project-by-project basis. It is essential that the CPE establish the communication protocol and ensure that

the Consultant and other entities are informed. The protocol should, as practical, address all forms of communication, including telephone conversations. Specifically, for correspondence, the following will apply:

1. Written Correspondence. The Consultant should address all written correspondence to the Consultant Design Engineer and to the "Attention" of the CPE.

2. Email. The Consultant should send all email to the CPE. The CPE will determine when it is appropriate to forward the email to a higher level.

3. Telephone Conversations. The Consultant should inform the CPE of any substantive telephone conversations with other entities if related to the project.

In general, the Consultant must adhere to the communication protocol as established by the CPE. The Consultant must inform the CPE of all substantive discussions directly with entities other than the CPE.

8.1.2 Role of MDT Units

8.1.2.1 General

On a Project or Special Project, all involved MDT units must adhere to the communication protocol as established by the CPE.

8.1.2.2 Review of Consultant Submittals

8.1.2.2.1 Technical Review

Depending upon the nature of the Consultant project, one or more MDT units (including the Consultant Plans Checker) may provide technical support to the project. The technical support units are responsible for providing technical reviews of Consultant plans and other deliverables. The primary focus of the technical review is to:

- ensure compliance with applicable Federal, State and local technical standards;
- ensure that the proposed design is cost-effective, constructible, complete, biddable and accurate;
- ensure the effective incorporation of all aspects of highway engineering (e.g., right-of-way, environmental, hydraulics); and
- ensure that the CADD files are compiled according to MDT standards and have been properly incorporated into the MDT Document Management System.

See Section 3.1.3.1 for more information.

8.1.2.2.2 Technical Review Procedures

The Consultant submits all project deliverables to the CPE. The CPE will prepare a transmittal memorandum to the appropriate MDT unit requesting its review and comment on the Consultant submittal. The CPE will submit the comments (i.e., written, verbal, marked-up plans) to the Consultant and coordinate the resolution of the comments between the MDT unit and Consultant.

8.1.2.2.3 Design Plan Submittals

Specifically for Consultant-designed plans, the following briefly describes the basic process:

- The Consultant is required to submit hard copies of the project plans and all electronic files on a CD.
- The applicable MDT unit(s) will conduct a review of the Consultant's plans and provide comments. The Consultant Design Bureau maintains the following checklists to review design plans submitted by Consultants:

  + Alignment Review Checklist,
  + Plan-in-Hand Checklist,
  + Final Plan Checklist, and
  + Contract Plans Submittal Checklist.

  Once completed, these checklists are filed in the master project file. At a minimum, written comments and a red-lined set of plans are submitted to the Consultant through the CPE.
- The Consultant must respond to all MDT comments in writing using the comment response tracking form (see Figure 8.3-A) and with a revised set of plans as required.
- This process is repeated for each major plan submittal.

For all Consultant-designed plans, the Consultant Plans Checker submits the final plans to the Contract Plans Bureau and facilitates all changes directly with the Consultant and other MDT units as necessary.

The CPE, Consultant Plans Checker and applicable MDT unit(s) also evaluate the Engineer's Estimate prepared by the Consultant and works with the Consultant to assist the Contract Plans Bureau with the Question and Answer (Q&A) forum process during project advertisement.

8.1.2.2.4 Technical Report Submittals

The following addresses the review of the technical report submittals:

- The Consultant is required to submit hard copies or electronic copies of all technical reports as required by the contract. These include Hydraulics Reports, Environmental Reports, Traffic Reports, Geotechnical Reports, etc.

- The CPE will distribute these to the applicable MDT unit(s) for a technical review and provide comments as necessary.

8.1.2.3 MDT Project Responsibilities

For most Consultant-designed projects, MDT retains the responsibility of performing several project activities. For example, these include:

1. Agreements. A project may require one or more agreements (e.g., utilities, railroads, local agencies, Tribal). The Consultant Project Engineer will work with the applicable MDT unit to process these agreements. See Section 4.7 for more information.

2. Right-of-Way. The CPE and Consultant will work together as required by the contract with the Right-of-Way Bureau to secure the required right-of-way and easements. In some cases, the Consultant will be contracted to perform R/W negotiations for MDT.

3. Environmental Permits/Certifications. A project may require one or more environmental permits or certifications. The Environmental Services Bureau obtains the necessary permit, certification or approval from the applicable resource agency.

8.2 "TERM CONTRACT" PROTOCOL

8.2.1 General

As discussed in Section 6.2.2, a MDT unit that provides a support service to a MDT-designed project may elect to secure Consultant services by implementing the procedures of a Term Contract to provide the support service. For all individual Term Assignments, the Functional Manager in the MDT unit is the central point of contact for all parties involved.

Section 7.3.2 discusses in detail MDT procedures for initiating, negotiating and processing a Term Assignment.

8.2.2 MDT Unit Roles

8.2.2.1 Functional Manager Role

During the implementation of an individual Term Assignment, the Functional Manager (FM) role is analogous to that of the CPE for a "Project." On a Term Assignment, the Consultant answers directly to the FM and adheres to the communication protocol established by the FM. The responsibilities of the FM include (but are not limited to):

- informing the CPE of any significant activities and issues related to the Term Assignment;
- ensuring that the Consultant meets the applicable engineering and technical criteria;
- reviewing all Consultant monthly progress reports;
- reviewing monthly invoices for goods and services received per the contract;
- establishing the communication protocol among the involved parties;
- coordinating with other MDT units as needed to elicit their involvement in the Term Assignment (e.g., obtaining environmental permits for subsurface exploration);
- coordinating efforts to address any project-related problems;
- scheduling and attending project meetings;
- monitoring the project schedule, including coordinating with the Engineering Information Services Section on monitoring OPX2 (see Section 4.1.1);
- monitoring the scope and project budget;
- ensuring that all technical documents (e.g., reports, design calculations, correspondence) are incorporated into the master project file;

- performing selected contract-related functions;
- providing written authorization for the Consultant to use overtime in accordance with the contract;
- preparing and negotiating term assignments;
- notifying the CPE when the Term Assignment has been completed; and
- preparing the Consultant performance evaluations.

8.2.2.2 Consultant Project Engineer (CPE) Role

The primary role of the CPE on a Term Assignment is to provide the necessary contract administrative support to the Functional Manager. The CPE serves as the central point of contact for all administrative activities during project implementation. The CPE responsibilities include:

- reviewing and processing all Consultant invoices;
- providing a full range of support to the Functional Manager, including ensuring that all contract requirements are met, assisting with contract implementation, assisting with communication, etc.;
- reviewing and processing Contract Amendments;
- implementing contract closure; and
- maintaining the master contract file in the Consultant Design Bureau for contract-related documents.

8.3 SPECIFIC PROJECT IMPLEMENTATION ITEMS

8.3.1 Monthly Invoices/Progress Reports

The following apply to monthly invoices and progress reports for all Consultant projects:

1. Sample Invoice Shell. Consultants must follow the format and invoice style of the sample MDT shell for invoices and progress reports.

2. Frequency. Invoices must be submitted no more often than monthly and submitted at least once every three months. Progress reports must be submitted monthly, even if no work has been performed during the applicable month.

3. Backup. Consultants need not submit the backup information to support their invoice (e.g., travel receipts, time sheets). However, the Consultant must retain all backup information for a period of not less than three years after project closure and must provide such information upon request.

4. Subconsultants. Subconsultants must follow the format and invoice style of the sample MDT shell for invoices and progress reports. All subconsultant invoices should be submitted with the prime Consultant's invoice.

Section 4.3.4 presents the internal procedure used by the Consultant Design Bureau to process the Consultant's monthly invoice and progress report.

8.3.2 Project Deliverables

8.3.2.1 Technical Standards

MDT has developed a comprehensive set of publications that document the Department's preconstruction and construction criteria, standards, policies and practices for developing the PS&E. The MDT publications identify the typical deliverables required from the Consultant. The publications include the:

- *MDT Road Design Manual*
- *MDT Structures Manual*
- *MDT Materials Manual*
- *MDT Hydraulics Manual*
- *MDT Surveying Manual*
- *MDT Bridge Inspection Manual*
- *MDT CADD Manual*
- *MDT Geotechnical Manual*
- *MDT Right-of-Way Manual*
- *MDT Environmental Procedures Manual*

- *MDT Traffic Engineering Manual*
- *MDT Standard Specifications for Road and Bridge Construction*

In addition, many MDT units have issued technical memoranda, Special Provisions, etc., that further document their policies and procedures. Any Consultant retained by MDT is responsible for ensuring that their project deliverables meet the requirements of the applicable MDT publications for technical accuracy, completeness, etc. Many of these policies and procedures can be found on the MDT website.

8.3.2.2 Documentation

Good project documentation is an essential element of project implementation. Depending upon the nature of the project, the required documentation may include the:

- scoping meeting minutes;
- miscellaneous meeting minutes;
- Preliminary Field Review Report;
- Alignment and Grade Review Report;
- Scope of Work Report;
- Plan-in-Hand Report;
- Final Plan Review Report;
- Traffic Engineering Report;
- Hydraulics Report;
- Geotechnical Report;
- environmental document;
- contract documents (draft and final); and
- other documents, as required.

The MDT publications listed in Section 8.3.2.1 document the format and content required for the various MDT documents that the Consultant must adhere to.

8.3.2.3 Disposition of Comments

The Consultant is responsible for responding to all comments on its project deliverables and for tracking their disposition. Figure 8.3-A presents the MDT Comment Response Matrix to be used, and the Figure provides an example of how to complete the Matrix. Basically, the Consultant must gather all comments (via email, written correspondence, mark-up of plans, verbal, etc.) from all sources (both internal and external to MDT) and populate the Comment Response Matrix. The Matrix is intended to be a tool to assist MDT and the Consultant in tracking comments and design decisions throughout the life of the project. The intent is to complement all major project deliverables (AGR, PIH and FPR). The Matrix can be found on the MDT website.

Project: 25 Miles North of Egypt North;
Project Number: NH 1(9)119;
UPN: 999901

Current Milestone: Plan-in-Hand

1 of 1
3/9/2010

Item No.	Sht/Pg No.	Source & Company or Agency	Comment Date	Comment	Response	*Resolved? (Y or N)
1	1	Les T. Adequate, PE; MDT Traffic	8-Aug-07	Consideration was given to left turn lanes but shouldn't there also be consideration given to a pull out lane or right turn lane on US 2 to allow trucks or vehicles storage area when the crossing is occupied by a train.	After further investigation it was discovered that the Preliminary Traffic Engineering Report - Activity 112 (1/9/03) provided a full discussion and analysis of both right turn and left turn lanes for this project. Recommended left turn lanes only in the report. The May 23, 2003 review of the report by MDT Traffic Engineer concurred specifically with the recommendations. Further direction from MDT required.	N
2	C1-C14	Flow M. Eter; MDT Hydraulics	9-Aug-07	These sheets were removed. Should the subsequent ones be renumbered so it doesn't appear that there are missing sheets?	Sheets will be renumbered. Sheets were left out pending final 95% field review decisions (which also subsequently deleted sheet C15).	Y
3	B3	Dee Taylor; MDT Bridge Bureau	32-Never-07	17 minor Redline comments on Bridge Details. See comments for details.	All 17 comments to be incorporated as suggested.	Y
4	T12	Ready T. Retire; MDT Maintenance	10-Aug-07	I recall talk of paving over the grate covers. If that is the intention then I have no comment other than it makes little sense from a maintenance perspective	Paving over the covers was requested by the Park during July 17th, 2003 meeting. Further direction from MDT required.	N

*Unresolved comments will be resolved at the appropriate AGR, PIH or FPR meeting and carried forward in the subsequent comment response document.

COMMENT RESPONSE TEMPLATE

Figure 8.3-A

8.3.3 Project Progress and Schedule

Sections 7.2.2.2 and 7.2.3.4 discusses the negotiations between MDT and the Consultant to establish the project schedule.

8.3.3.1 Consultant Responsibilities

MDT expects that all Consultants will have in place the proper internal controls to monitor the project schedule and project budget. The Consultant is responsible for notifying the Consultant Project Engineer (CPE) if the project is behind schedule or not within scope or budget. Consultants are required to monitor the project based on interim tasks, deliverables or milestones, not just on the overall project schedule and budget.

8.3.3.2 CPE Responsibilities

As discussed in Section 4.1.1, the CPE is responsible for coordinating with the Engineering Information Services Section (EISS) on the implementation of OPX2 for a Consultant-designed project.

8.3.3.3 Stop Work Order

As stated in the MDT Standard Agreement, the Consultant Design Engineer (CDE) has the authority to issue a Stop Work Order on a Consultant-designed project when deemed to be in the best interest of the Department. The CDE is not required to seek approval from the Consultant Selection Board to stop work but must advise the Board when this action is taken.

8.3.4 Project Meetings

As needed, the CPE will periodically schedule project meetings with the Consultant, attended by others as necessary, throughout project implementation. Project meetings may be scheduled for a variety of reasons, including:

- the review of major Consultant submittals;
- problems, delays or adverse conditions that may significantly impact the goals of meeting the project objectives, project schedule or project budget;
- to resolve any scope-of-services issues; or
- to resolve any contract-related issues.

The CPE will invite the attendees and will prepare an agenda for the meeting. For special cases, at the discretion of the CPE, the CPE can inform the Consultant to make all

arrangements for any project meetings (e.g., public involvement, technical advisory counsel, Community Advisory counsel). The Consultant is responsible for preparing minutes of the meeting and submitting these to the CPE for distribution.

The CPE may also visit the Consultant's office on a frequency that is commensurate with the magnitude and complexity of the project.

8.3.5 Consultant Project Files

The Consultant is required to maintain its project files as described in the contract. As stated in the Standard Agreement, this includes all back-up data for plans, reports, mapping, estimates, etc., that are submitted to MDT. It also includes all books, papers, records, etc., relating to the costs and expenditures incurred. These must be made available to MDT for audit and review for three years from the date of final payment.

8.3.6 Contract Amendments

The following steps outline the circumstances and process for accumulating out of scope work requests from a Consultant. This change in practice is intended to minimize the execution of small amendments, especially ones that may have the potential to be absorbed within an existing contract ceiling:

1. When work is deemed out of scope by the Consultant and the Department, the Consultant will provide the Department with an amendment request, which will include a scope and budget for the out of scope work.

2. The Consultant Project Engineer will prepare an independent cost estimated based on the out of scope work.

3. The scope and budget will be negotiated as necessary.

4. The Consultant Design Engineer will decide whether to (a) request the amendment be processed immediately or (b) request the scope and budget be approved immediately, but the amendment be processed at a later date. Amendment requests anticipated to impact the schedule will be processed immediately.

    a. If the decision is made to request the amendment be processed immediately, regular practices will ensue. These include presenting the scope and budget to the Preconstruction Engineer for approval via the Contract Funding Approval memo and amendment execution.

    b. If the decision is made to request the amendment be processed at a later date, the scope and budget will be presented to the Preconstruction Engineer for approval via the Contract Funding Approval memo.

- The memo will identify the intent to execute the amendment at a later date.

- Upon approval of the Contract Funding Approval memo by the Preconstruction Engineer, the Consultant Project Engineer will notify the Consultant, in writing (email okay) that the Department has approved the proposed scope for the negotiated budget and identify the circumstances by which the amendment will be processed.

- An amendment will be processed upon either of the following scenarios:

  - Approved amendments not yet executed that reach a cumulative value of not more than $100,000.

  - The Consultant identifies an imminent budget deficit requiring the contract ceiling be amended.

8.3.6.1 Justification

Contract Amendments may be necessary for a variety of reasons, including:

- a change in project scope (e.g., character of work, complexity of work);
- a change in project duration; or
- a change in project conditions (e.g., weather).

The authority to approve amendments of $200,000 and greater is vested in the Consultant Selection Board in accordance with Section 6.3.1.7. This limitation is not applicable to Term Contract Amendments.

The Consultant must submit thorough documentation on the justification and cost for the Contract Amendment (e.g., description of out-of-scope work, detailed cost estimate). Unless authorized otherwise by the Consultant Design Engineer, the Consultant cannot initiate any additional work until the Contract Amendment has been executed. However, expedited construction support services are an exception (see Section 8.3.6.5).

8.3.6.2 Standard Procedure (Regular Procedure)

In general, the standard procedure for processing Contract Amendments is identical to the MDT procedure for processing the original Contract. See Section 7.2.4. One exception is that signatures are not required from the Civil Rights Bureau on Contract Amendments and the signature sequence is different. Any adjustment in the fixed fee will be determined on a case-by-case basis. Once the scope and cost of the Contract Amendment have been determined, the CPE will prepare a Memorandum from the Consultant Design Engineer and through the

Consultant Plans Engineer to the Preconstruction Engineer requesting approval to proceed with the Amendment.

Before authorization, the CPE must stamp every page of the Contract Amendment attachments. MDT's objective is that it will require six weeks to process the Contract Amendment from the time the Consultant submits its cost estimate until the time that MDT executes the Amendment. See the "MDT Signature Authority" document to identify who is authorized to sign a Contract Amendment.

8.3.6.3 Standard Procedure (Expedited Procedure)

In some instances, MDT may need to expedite out-of-scope design services during the preliminary engineering (PE) design phase of a project (e.g., urgent R/W issues, management directives and unexpected changes to design prior to letting a project). The initial process requires written approval by the Consultant Design Engineer to authorize the expedited procedure and allow the Consultant Project Design Engineer to initiate out-of-scope services with the Consultant while the Contract Amendment is being processed. In order for the Consultant Design Engineer to authorize such services, the cost for any out-of-scope work cannot exceed $20,000. Then, the Consultant Design Engineer or their designee will negotiate directly with the Consultant to perform the out-of-scope work and authorize the Consultant to initiate the work immediately. The Contract Amendment will then be processed and honored by MDT using the standard amendment procedure. All requests to the Consultant must be in writing (email is sufficient) and documented in the master contract file.

8.3.6.4 Construction Support Servic es (Regular Procedure)

For Consultant-designed projects, MDT will often choose to amend the Consultant contract to provide support services during project construction. These services may include answering questions from MDT field construction personnel, interpreting and clarifying the construction plans, making minor corrections to the contract documents, etc. Normally, during the period between Final Plan Review and before construction begins, MDT will determine if any construction support services are needed from the Consultant. The request for construction support services may be made by the District Construction Engineer, District Administrator and/or the Headquarters Construction Engineer. Any request must be in writing and documented in the master contract file.

It is important that the Consultant maintain thorough documentation for construction support services. When the Consultant submits its invoice, use the sample MDT shell for invoices and progress reports to document the work that was performed. It is especially important that the Consultant maintain good records for this work.

The above does not apply to errors and omissions in the contract documents that are the responsibility of the Consultant. See Section 12.2.2 for a discussion on errors and omissions.

8.3.6.5 Construction Support Services (Expedited Procedure)

In some cases, MDT may need the services of the design Consultant expeditiously (e.g., changes to design, evaluation of Value Engineering Proposals from the Contractor). In these cases, the Consultant Design Engineer and MDT construction staff may agree that an expedited procedure is justified to allow the Consultant to provide out-of-scope construction support services while the Contract Amendment is being processed. In the expedited procedure, the Consultant Design Engineer or his designee can negotiate directly with the Consultant to perform the out-of-scope work and authorize the Consultant to initiate the work immediately, if the agreed-upon cost is $50,000 or less. The formal Contract Amendment will then be processed and honored by MDT using the standard procedure for an Amendment. The request for construction support services may be made by the District Construction Engineer, District Administrator and/or the Headquarters Construction Engineer. Any request must be in writing (email is sufficient) and documented in the master contract file.

The above does not apply to errors and omissions in the contract documents that are the responsibility of the Consultant. See Section 12.2.2 for a discussion on errors and omissions.

8.3.7 Project Closure

The following presents the MDT procedure to implement project closure:

1. MDT Action. When the Consultant Project Engineer concludes that the Consultant has fulfilled all terms of the contract, the CPE will notify the Consultant by letter, signed by the Consultant Plans Engineer, that the project has been completed. The CPE will also notify the Consultant that it has 90 days to submit its final invoice and that the Consultant must now submit to MDT all project-related documentation as required by the contract.

2. Consultant Action. The Consultant must submit its final invoice stating that:

   - the project is complete; and
   - this is the final invoice, including all project-related documentation.

3. MDT Action. The Consultant Design Engineer will issue the formal project closure letter to the Consultant.

8.4 CONSULTANT PERFORMANCE EVALUATION

8.4.1 Usage

Consultant performance evaluations are an important factor used by MDT in rating and selecting Consultants for future work. See Section 6.3.1.6. The Consultant Design Bureau maintains a systematic repository of Consultant evaluations for this purpose.

8.4.2 Evaluators

Any MDT employee who has been substantially involved in the project and/or who has had significant interaction with the Consultant is provided with the opportunity to complete the MDT Consultant Performance Evaluation Form. The form provides space for written comments. Substantive comments are strongly encouraged, because these provide justification for the rating and provide the Consultant with an understanding of the rating. See Figure 8.4-A. The following individuals are required to prepare the Form for each Consultant for each State Fiscal Year:

- Consultant Project Engineer,
- Consultant Plans Checker, and
- Functional Manager for a Term Contract.

8.4.3 Procedures

In the Spring, the Consultant Design Engineer distributes a request to appropriate MDT personnel to perform Consultant evaluations for the State Fiscal Year that began the previous July 1. These evaluations are factored into the Consultant rating process for the upcoming State Fiscal Year beginning July 1. Note that the evaluation only includes the prime Consultant; i.e., the prime consultant includes all subconsultants as a team. Consultants may be debriefed on their performance evaluation upon request to the CDE.

RATING FORM CDS-7

Montana Department of Transportation
CONSULTANT PERFORMANCE EVALUATION FORM
Functional Manager Form

Consultant Name:			
Location (City, State):			
Project Name:			
Control Number:		**Project Number:**	
Project Type or Work Performed:			
Evaluation Period:			

Letter Grade Rating (Note: Not all grades are used in each area of evaluation)		
A: Exceptional; Exceeds Expectations	**A-: Consistently Strong**	**B: Good, Proficent**
C : Adequate, Capable	**D: Weak**	**F: Unacceptable**

AREAS OF EVALUATION	Letter Grade Rating	Description of Letter Grade Rating
Quality of Work: Focus areas: Quality expectations, quality control. Applies appropriate guidelines, standards, design memos and policies, and/or other available information to produce accurate and technically correct deliverables. Electronic files are compatible with appropriate computer systems. Plans are constructible.		
Cooperation: Focus areas: Works cooperatively with staff. Communicates issues and information clearly and concisely. Responds to all review comments in subsequent submittals. Responsive to general request. Team player.		
Cost Effectiveness/Innovation: Focus Areas: Work products and services represent a good value for the public expenditure. Seeks opportunities to incorporate innovative design/construction features.		
Score (maximum score is 30)		**0.0**

Written comments required to supplement scoring - see page 2

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Figure 8.4-A

RATING FORM CDS-7

CONSULTANT PERFORMANCE EVALUATION FORM
Functional Manager Form

Quality of Work: _____

Cooperation: _____

Cost Effectiveness: _____

Additional Comments: _____

Recommendations for Future Hiring: _____

Evaluated By: _____
(Please Print) Signature Date

Reviewed By Consultant Project Engineer: _____
Initials

Reviewed By Consultant Plans Section: _____
Initials Date

Approved By Consultant Design Engineer: _____
Initials Date

Return the original, completed, and signed form to the Consultant Design Bureau

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Figure 8.4-A
(Continued)

Montana Department of Transportation
CONSULTANT PERFORMANCE EVALUATION FORM
Project Manager Form

RATING FORM CDS-7

Consultant Name:			
Location (City, State):			
Project Name:			
Control Number:		**Project Number:**	
Project Type or Work Performed:			
Evaluation Period:			

Letter Grade Rating (Note: Not all grades are used in each area of evaluation)		
A: Exceptional; Exceeds Expectations	**A-: Consistently Strong**	**B: Good, Proficent**
C : Adequate, Capable	**D: Weak**	**F: Unacceptable**

AREAS OF EVALUATION	Letter Grade Rating	Description of Letter Grade Rating
Schedule: Focus areas: project schedules, meeting established milestone dates, providing timely completion of tasks, contract negotiations		
Quality of Work: Focus areas: Quality expectations, quality control. Applies appropriate guidelines, standards, design policies, and/or other available information to produce accurate and technically correct deliverables. Responds to all review comments in subsequent submittals. Electronic files are compatible with appropriate computer systems. Plans are constructible. Construction change orders are not a result of plans errors and omissions.		
Cooperation: Focus areas: Works cooperatively with client, other consultants, and project stakeholders. Proactively coordinates all activities that may impact the project. Communicates issues and information clearly, concisely, and at appropriate intervals. Reacts promptly and cooperatively to potential errors and omissions issues. Responsive to client's requests. Team player.		
Management: Focus Areas: Works through client's project/contract manager. Manages the personnel, budget, schedule, and subconsultants to ensure performance. Maintains accurate cost records, design memos, logs, etc. Maintains key personnel throughout project. Invoices and progress reports are accurate and timely. Management communicates effectively with their staff.		
Cost Effectiveness: Focus Areas: Work products and services represent a good value for the public expenditure. Seeks opportunities to incorporate innovative design/construction features. All requirements of the contract (work products, management, schedule) are performed in an efficient manner.		
Score (maximum score is 30)	0.0	

Written comments required to supplement scoring - see page 2

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1

Figure 8.4-A
(Continued)

Montana Department of Transportation
CONSULTANT PERFORMANCE EVALUATION FORM
Project Manager Form

RATING FORM CDS-7

Schedule: _____

Quality of Work: _____

Cooperation: _____

Management: _____

Cost Effectiveness: _____

Additional Comments: _____

Recommendations for Future Hiring: _____

Evaluated By: _____
(Please Print) Signature Date

Reviewed By Consultant Project Engineer (when required): _____
Initials

Reviewed By Consultant Plans Engineer: _____
Initials Date

Approved By Consultant Design Engineer: _____
Initials Date

Return the original, completed, and signed form to the Consultant Design Bureau

Revised 4/14/2011

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Figure 8.4-A
(Continued)

Table of Contents

Chapter 9
PROJECT QUALITY

9.1 PROJECT QUALITY OBJECTIVES

9.1.1 MDT Overall Policy Statement

MDT expects high quality planning and engineering services for all MDT projects. To achieve that goal, MDT allows a reasonable level of effort on every project specifically for quality control. High quality work enhances MDT's ability to efficiently deliver projects on or ahead of time and within or under budget.

Project quality is an inherent objective for every MDT Consultant project. MDT expects that all Consultants will have the proper internal controls to ensure that their products provide the quality as required by the contract. For every Consultant project, the MDT structure is designed to review and evaluate these products for quality compliance.

Quality Assurance/Quality Control reviews are required for all Consultant deliverables. Each project shall conform to the Consultant's firm-wide quality assurance system and shall include quality control reviews at milestone submittals. The Consultant's proposal should include labor hours for quality control reviews.

9.1.2 Project Quality Plan

The nature of certain projects lends itself to the development and implementation of a documented, strategic Project Quality Plan (PQP). This Chapter documents MDT policies on the:

- warrants for a PQP,
- objectives of a PQP, and
- implementation of a PQP.

Therefore, on these selected Consultant projects, Consultant services and products will consistently meet or exceed MDT's needs and expectations through the implementation of a defined Project Quality Plan. MDT expects that the Consultant will prepare and implement project-specific Quality Control activities. QC activities should be based on the Consultant's established Quality Assurance program.

9.2 PROJECT QUALITY PLAN OBJECTIVES

9.2.1 Definitions

The following defines various terms related to the development of a Project Quality Plan:

1. Quality. Quality is the degree to which a product or service meets or exceeds MDT requirements or expectations.

2. Quality Assurance (QA). An overall program, adopted by the Consultant, that establishes project-related policies, standards, guidelines and systems intended to produce an acceptable level of quality in the Consultant's products.

3. Quality Control (QC). Project-specific activities that the Consultant uses that apply the policies, procedures, standards, guidelines and systems developed in the QA program to maintain an acceptable level of quality in the Consultant's products, through application of sound project management principles and practices.

4. Project Quality Plan (PQP). A systematic Plan prepared by the Consultant's Project Manager that documents the QC activities and quality system elements necessary to meet MDT's needs and expectations.

9.2.2 Candidate Projects for a PQP

MDT will require the preparation of a Project Quality Plan on selected projects as recommended by the Consultant Project Engineer and approved by the Consultant Design Engineer. The following identifies candidate projects for which a PQP will be considered:

- all projects with a Consultant fee over $500,000;
- all NEPA studies with a Consultant fee over $100,000;
- other medium to high risk projects as determined through a Risk Assessment (see Section 9.3.2); and
- other selected projects at the discretion of the Consultant Design Engineer.

9.2.3 PQP Objectives

For the selected projects, the objectives of the Project Quality Plan are to systematically:

- improve the clarity, consistency and coordination between disciplines in Consultant-prepared plans, specifications, reports, studies, etc.;

- eliminate or minimize the occurrence of errors and omissions on Consultant-designed projects;
- provide a uniform process for MDT review of Consultant-prepared work products, for Consultant response and for incorporation of MDT review comments; and
- improve schedule adherence on Consultant projects through timely reviews, documented decision-making and elimination of re-work.

9.3 PROJECT QUALITY PLAN IMPLEMENTATION

9.3.1 Roles and Responsibilities

The following identifies the MDT roles and responsibilities:

1. Consultant Design Engineer. The Consultant Design Engineer is responsible for MDT QC/QA policies and oversight of the Consultant PQP.

2. Consultant Plans Engineer. The Consultant Plans Engineer is responsible for supervising the Consultant Project Engineer's oversight of PQPs to ensure that the MDT QC/QA policies are met.

3. Consultant Project Engineer. On individual Consultant projects, the Consultant Project Engineer serves as MDT's Project Manager and is responsible for preparing a project risk assessment, recommending if a PQP is required, reviewing and commenting on the PQP and monitoring its implementation. The CPE can obtain assistance from other technical experts within the Department to complete the risk assessment forms.

The following identifies the roles and responsibilities of the Consultant:

1. Consultant Principals. The Consultant Principal is responsible for internal Quality Assurance controls and the overall quality of a firm's work products.

2. Consultant Project Manager. The Consultant Project Manager is responsible for the preparation and implementation of the PQP.

3. Consultant Quality Manager. The Consultant Quality Manager is responsible for ensuring the implementation of the PQP through assignment of independent and qualified QC reviewers and implementation of the PQP.

4. Consultant Staff (Engineers, Planners, Technicians). The Consultant staff is responsible for understanding and adhering to the PQP. The Consultant must ensure that the individuals who will fulfill these tasks are identified in the Plan.

9.3.2 Risk Assessment

As stated in Section 9.2.2, a project Risk Assessment is one mechanism used to identify candidate projects for a formal PQP. For these projects, MDT performs a two-phase assessment. Phase I is performed prior to selecting a Consultant. The results of Phase I may be considered in the selection process for the Consultant. Phase II is performed after the Consultant is selected.

Section 9.4 presents the MDT Risk Assessment Forms. The Forms provide a list of issues common to most projects. Additional issues may be added for unique project features that may increase or decrease risk.

9.3.2.1 Phase I Assessment

The Phase I Risk Assessment evaluates the project in two categories: Project and Technical (using the appropriate Risk Assessment Forms in Section 9.4). The Consultant Project Engineer rates each issue as low, medium or high, then provides an overall rating for each factor (L, M or H). The overall factor ratings are then used to rate the project (L, M, H). Projects having an overall rating of medium or high may be candidates for a PQP.

9.3.2.2 Phase II Assessment

The Phase II Risk Assessment evaluates the selected Consultant using the Consultant Team Risk Assessment Form. The Consultant Project Engineer rates each issue as low, medium or high, then provides an overall rating for the Consultant (L, M or H). Consultants with an overall rating of medium or high may be candidates for a PQP on that project.

9.3.3 Contract Reviews

In developing Consultant contracts, consider the risk and mitigation of risk through implementation of a PQP.

On the selected projects, the scope of work should contain a task for the development and implementation of a PQP, including discrete QC reviews, comment resolution meetings with MDT, and documenting written responses to comments. See Section 8.3.2.3. Consultant project schedules should show discrete tasks or summary tasks corresponding to OPX2 activities, and any QC/QA task should be embedded within the corresponding OPX2 tasks.

Although the quality of work products is inherent to all Consultant activities, the level of effort for medium and high-risk projects may warrant an increased level of effort. The Consultant's assignment of specific hours to QC activities may aid the Consultant Project Engineer in his/her oversight of PQP implementation.

9.3.4 Personnel Registration, Certification and Training

The Consultant proposal should specify requirements by project position for Consultant staff registration, certification and training. Requirements should consider any medium or high project-specific risk factors and standard MDT policies and practices.

9.3.5 Project Quality Plan Content

The following outline is provided as a guide for the content of a Project Quality Plan. The Consultant Project Engineer and the Consultant should tailor the PQP to the specific project. The PQP shall incorporate mitigation measures specifically designed to reduce the medium and high-risk factors identified in the Risk Assessment.

A. Introduction

B. Management and Organization

1. Quality Control Team organizational chart

a. project manager
b. project quality manager
c. technical reviewers
d. technical staff

2. Identification of roles and responsibilities

C. Subconsultant Management and Responsibility

D. Standards and Requirements

1. Applicable standards
2. MDT requirements

E. Specification of Quality Activities

1. Schedule and budget for quality activities
2. Early action items
3. Informal and formal reviews
4. Documentation of design decisions
5. Documentation of design exceptions

F. Guidance on Production of Deliverables

1. Format
2. CADD standards
3. Production process and workflow guidelines

G. Deliverable Submittals to MDT

1. Consultant responsibilities

a. reproduction
b. comment tracking and resolution
c. review meetings, if required

2. MDT procedures

    a. guidelines
    b. checklists
    c. documentation (Comment Response Matrix)

        1) reviewer comments
        2) Consultant response to comments

H. Stamping and Sealing of Documents

I. Project Quality Control Documentation

J. Close-Out Activities

K. PQP Updates

9.3.6 Stamping and Sealing of Documents

The contract scope of services should clearly stipulate the sealing of plans and other documents by a Registered Professional Engineer in the State of Montana. The Consultant will ensure that the Consultant staff is eligible to stamp/seal the plans and documents (i.e., registration is appropriate and current). If changes in designated staff occur, the Consultant should immediately notify the Consultant Project Engineer and identify suitable replacements.

9.3.7 Documentation and Records

All documentation required as a part of the PQP shall be made available to the Consultant Project Engineer upon request. The Consultant Project Engineer and Consultant should discuss and agree upon which records will be routinely submitted to MDT for information and use. All responses to comments shall be responded to in writing.

An integral tool in Consultant project administration is the Comment Response Matrix. Refer to Section 8.3.2.3 regarding tracking, resolution and disposition of MDT review comments throughout the life of a Consultant project.

9.3.8 Quality Audits

The PQP may contain a provision for Consultant auditing of its own QC/QA program. The Consultant Project Engineer may request an audit of the Consultant's quality records at any time, with two weeks written notice. The Consultant shall make the quality records available and provide a suitable workspace.

9.3.9 Preventative Action

MDT may take preventative action on specific projects to help eliminate the causes of potential adverse conditions. The Consultant Design Engineer and/or Consultant Plans Engineer will determine preventative actions, in consultation with the Consultant Project Engineer. Preventative actions include:

- Audits,
- Management Reviews,
- Training,
- Constructibility Reviews, and
- Independent or Peer Reviews.

9.3.10 Corrective Action

If significant quality deficiencies are identified or quality is trending negatively, the Consultant Project Engineer should initiate corrective action through informal contact with the Consultant. If the trend continues, then the Consultant Project Engineer, with the approval of the Consultant Plans Engineer and/or Consultant Design Engineer, will identify the adverse condition and prepare a letter to the Consultant requesting corrective action. The Consultant will respond in writing with a corrective action plan. The plan shall include the suspected cause of the adverse conditions, the corrective action proposed, the timeline for implementation and the resolution of the adverse conditions. The Consultant Project Engineer will monitor corrective action through resolution. When the Consultant Project Engineer and Consultant agree that the corrective action is complete, the Consultant Project Manager shall prepare a letter summarizing the action and results for submittal to the Consultant Project Engineer.

9.3.11 Project Close-Out

Consultant projects shall be closed out in accordance with the Consultant's PQP project close-out procedures and MDT requirements (see Section 8.3.7). As a part of the project close out, the Consultant Project Engineer shall prepare a Consultant evaluation with specific measures for evaluating project quality and effectiveness of the PQP (see Section 8.4).

9.3.12 Monitoring Results

The Consultant Plans Engineer will maintain a library of PQPs and Risk Assessment forms for evaluation and reference on future projects. The Consultant Design Engineer will periodically evaluate the effectiveness of the Consultant QC/QA program.

9.4 RISK ASSESSMENT FORMS

9.4.1 Risk Assessment Forms

This Section presents the MDT Risk Assessment Forms, which are used to identify candidate projects for a Project Quality Plan.

9.4.2 Technical Risk Assessment Forms

A Technical Risk Assessment is intended to identify those portions of a project that represent medium and high risks because of their technical complexity. For some projects, no technical areas will represent medium or high risk; for others, a number of areas may warrant designation as medium or high risk. For bridge design projects, for example, it is likely that many design aspects will represent a high level of risk (seismic, cofferdam, special structure type) whereas other issues (load rating, concrete slabs) are likely to represent a low risk. However, for environmental analyses, the level of risk is not inherent in the technology itself but, rather, in the characteristics or context of the project. Therefore, in one project, wetland impact analysis may represent an area of high risk because of the technical complexity of analyzing the affected resource; in another project, wetlands may not even be a consideration.

In completing the Technical Risk Assessment, evaluate the risk based on the technical complexity of the various elements of the project; a technically complex aspect of the project should receive a “high” risk rating. If necessary, the Consultant Project Engineer should request technical assistance from other MDT units when assessing technical risk.

Form C-1 — MDT CONSULTANT PROJECT RISK ASSESSMENT

Project Name: _____ **Consultant:** _____			
Evaluation Factors	**Risk Evaluation**[1]		
	High	**Medium**	**Low**
Project Factors			
Project management experience of MDT Consultant Project Engineer			
Project type/scope/schedule/contracting new or unfamiliar to MDT staff			
Multiple and/or difficult third-party stakeholders			
Potential for scope/budget/schedule mismatch			
Scope/budget /schedule outside of comfort zone			
Project requires use of new or unique technology, tools and/or methods			
High potential for public and/or agency controversy			
Project crosses multiple technical disciplines			
Project subject of public controversy			
Accelerated schedule			
Difficulty of technical areas within technical disciplines (e.g., survey and mapping, hydraulics, geotechnical, utilities, environmental planning)			
Technical requirements including review agency(ies), standards and conditions affecting technical work			
Difficulty and/or complexity of application of technical tools (e.g., CADD, GIS, scheduling)			
Other (Add project-specific project issues below):			
Project Factors Summary Risk [2]			

[1] *Enter an "X" in the box corresponding to the appropriate level of risk for that factor; enter "N/A" if not applicable to this project.*

[2] *Enter the summary risk evaluation of the contributing project factors, using best judgment based on the degree and complexity of individual factors.*

Form C-1 — MDT CONSULTANT PROJECT RISK ASSESSMENT

	Risk Evaluation[1]		
	High	**Medium**	**Low**
Consultant Factors			
Consultant new to MDT			
High number of subconsultants and/or difficult and/or new			
Changes in key staff from pursuit (MDT, Consultant or subconsultants)			
MDT unsatisfied with previous work by Consultant			
MDT technical resources unfamiliar with Consultant			
Consultant slow to invoice, process amendments, make decisions, etc.			
Key Consultant staff at different location from Project Manager			
First-time Project Manager or Project Manager has critical project gaps			
Project Manager with performance issues			
Project Manager type/style versus project type			
Project Manager not a good communicator			
Skill and availability of technical staff (including subconsultants)			
Technical leadership			
Other: (Add project-specific management/team issues here)			
Consultant Factors Summary Risk [2]:			
Project Factors Summary Risk (from Page 1):			
Technical Factors Summary Risk [3](refer to Technical Risk Assessment Form(s) for the appropriate project type)			
Project Factors Overall Risk Evaluation [4] **:**			

[1] *Enter an "X" in the box corresponding to the appropriate level of risk for that factor; enter "N/A" if not applicable to this project.*

[2] *Enter the summary risk evaluation of the contributing Consultant factors, using best judgment based on the degree and complexity of individual factors.*

[3] *Transfer the Technical Factors Summary Risk from the Technical Risk Assessment form(s) to this line.*

[4] *Enter the overall summary risk evaluation for the project, combining the project, Consultant, and Technical Risk factors and using best judgment based on the degree and complexity of the project*.

Form T-1 — TECHNICAL RISK ASSESSMENT: Bridges and Structures

	Risk Evaluation[1]			
	N/A	**High**	**Medium**	**Low**
Technical Factors				
Precast prestressed concrete				
Post-tensioned concrete				
Steel plate girder				
Steel truss				
Steel box girder				
Timber				
Construction inspection				
Condition inspection				
Load rating				
Seismic design				
Concrete segmental				
Steel arch				
Concrete arch				
Rehabilitation				
Special (cable bridges)				
Railroad structures				
Roadway and bridge geometrics				
Bridge specifications				
Movable bridges				
Coffer dams				
Drilled shafts				
Earth retaining systems				
Long-span culverts				
Structural materials				
Sound walls				
Expansion joints				
Bearings				
Other (specify):				
Technical Factors Summary Risk [2]:				

[1] *Enter an "X" in the box corresponding to the appropriate level of risk for that factor; enter "N/A" if not applicable to this project.*

[2] *Enter the summary risk evaluation of the contributing technical factors, using best judgment based on the degree and complexity of individual factors.*

Form T-2 — TECHNICAL RISK ASSESSMENT: Highways and Miscellaneous Projects

	Risk Evaluation[1]			
	N/A	**High**	**Medium**	**Low**
Technical Factors				
Corridor planning/rural highways				
Corridor planning/urban streets and arterials				
Corridor planning/freeways and interchanges				
Geometric design – rural highways				
Geometric design – urban streets and arterials				
Geometric design – freeways and interchanges				
Safety and operational effects of geometrics				
Hydrology/hydraulics				
Roadside design (includes barrier design)				
Work zone traffic control/maintenance of traffic				
Signing and pavement marking				
Right-of-way engineering				
Illumination design				
Pavement and geotechnical design				
Utility relocation				
Specifications				
Construction cost estimating				
Landscape architecture				
Other (specify):				
Technical Factors Summary Risk [2]:				

[1] *Enter an "X" in the box corresponding to the appropriate level of risk for that factor; enter "N/A" if not applicable to this project.*

[2] *Enter the summary risk evaluation of the contributing technical factors, using best judgment based on the degree and complexity of individual factors.*

Form T-3 — TECHNICAL RISK ASSESSMENT: Traffic Engineering

	Risk Evaluation[1]			
	N/A	**High**	**Medium**	**Low**
Technical Factors				
Travel demand modeling				
TSM/TDM				
Systems analysis				
Traffic simulation				
Traffic impact studies				
Traffic operations analysis – rural highways				
Traffic operations analysis – urban streets and arterials				
Traffic operations analysis – freeways and interchanges				
Intelligent transportation systems				
Traffic signal system design				
Access management				
Traffic and highway safety				
Parking planning and design				
Pedestrian and bicycle planning and design				
Other (specify):				
Technical Factors Summary Risk [2]:				

[1] *Enter an "X" in the box corresponding to the appropriate level of risk for that factor; enter "N/A" if not applicable to this project.*

[2] *Enter the summary risk evaluation of the contributing technical factors, using best judgment based on the degree and complexity of individual factors.*

Form T-4 — TECHNICAL RISK ASSESSMENT: Environmental Documentation

	Risk Evaluation[1]			
	N/A	**High**	**Medium**	**Low**
Technical Factors				
NEPA process				
Air quality impact analysis				
Energy impact analysis				
Noise impact analysis				
Hazardous materials				
Light emissions				
T&E/biological assessment				
Fisheries and aquatic ecology impact analysis				
Wildlife impact analysis				
Wetland impact analysis				
Water quality impact analysis				
Archaeology				
Historic				
Economic impact analysis				
Social impact analysis				
Farmland impact analysis				
Floodplain impact analysis				
Land use impact analysis				
Secondary and cumulative impact analysis				
Solid waste impact analysis				
Visual resource impact analysis				
Section 404/401/NPDES permitting				
Section 4(f) and 6(f) analysis				
SPA 124				
Environmental justice				
Project definition				
Purpose and need				
Traffic analysis				
Alternatives analysis and screening				
Other (specify):				
Technical Factors Summary Risk [2]:				

[1] *Enter an "X" in the box corresponding to the appropriate level of risk for that factor; enter "N/A" if not applicable to this project.*

[2] *Enter the summary risk evaluation of the contributing technical factors, using best judgment based on the degree and complexity of individual factors.*

Form T-5 — TECHNICAL RISK ASSESSMENT: _____PROJECT[1]

	Risk Evaluation[3]			
	N/A	**High**	**Medium**	**Low**
Technical Factors[2]				
Technical Factors Summary Risk [4]:				

[1] *Enter the type of project here (e.g., geotechnical engineering, rest areas, ER project, etc.)*

[2] *Based on the type of project, list appropriate technical risk factors*

[3] *Enter an "X" in the box corresponding to the appropriate level of risk for that factor; enter "N/A" if not applicable to this project.*

[4] *Enter the summary risk evaluation of the contributing technical factors, using best judgment based on the degree and complexity of individual factors.*

Chapter 10
RESERVED

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Chapter 11
ACCOUNTING AND AUDITING GUIDELINES

The proper compliance with accounting and auditing standards is essential to government accountability to the public. Government officials entrusted with public resources are responsible for implementing public functions legally, effectively, efficiently, economically, ethically and equitably. Legislators, government officials and the public need assurances that:

- Government manages public resources and uses its authority properly and in compliance with laws and regulations.
- Government programs are achieving their objectives and desired outcomes.
- Government managers are held accountable for their use of public resources.

The MDT Internal Audit Unit is responsible for providing the Department's internal audit function. The Unit administers a comprehensive program of audits and investigations to ensure MDT's conformance with the applicable laws, regulations and policies that govern the MDT program. In addition, the Internal Audit Unit helps to determine if Consultants comply with contract requirements and ensuring that all charges to the Department are reasonable and allowable per State and Federal laws and regulations.

Chapter 11 discusses basic accounting and auditing concepts, and the Chapter documents MDT policies and procedures that apply to Consultant firms retained by MDT. The audience for the Chapter is the Consultant Design Bureau, especially the Consultant Project Engineers, and Consultants providing services to MDT. The Chapter is not intended for day-to-day use by the Internal Audit Unit.

11.1 MDT POLICIES AND PROCEDURES

11.1.1 General

Section 11.1 presents the MDT processes for the major activities of the Internal Audit Unit that impact the MDT Consultant Program.

11.1.2 Cognizant Indirect Cost Rate Review

Chapter 7 discusses the contract negotiations process for Consultant projects. An important element of this process is the Consultant's submission of and MDT review of the Consultant's indirect cost rate. As discussed in Section 7.2.3.2., the Consultant will have preferably provided its supporting data for its indirect cost rate at the scoping meeting, or the Consultant will have an accepted rate on file with MDT. Otherwise, the supporting data must be submitted with the cost proposal. See Section 11.2 for MDT policies on various aspects of indirect cost rates.

If MDT has not accepted the Consultant's indirect cost rate for the project, the CPE will submit the Consultant's supporting documentation to the Internal Audit Unit. The CPE will prepare the transmittal memo to Internal Audit, which is signed by the Consultant Plans Engineer. The CPE will request that the Internal Audit Unit conduct its cognizant indirect cost rate review and provide the Unit's recommendations on the acceptance or rejection of the Consultant's indirect cost rate.

In its review of the Consultant's documentation for its proposed indirect cost rate, the review by the Internal Audit Unit will include:

- Does the report contain an opinion that indicates that the audited Schedule of Indirect Costs is fairly presented in accordance with applicable Federal regulations?

- Does the report contain a scope that indicates that the audit was performed in accordance with Government Auditing Standards?

- Does the scope indicate that Title 48, CFR Part 31 was used in determining acceptable costs?

- Did the CPA issue a report on the internal control and compliance with laws, regulations and provisions of contracts or grant agreements as required by Government Auditing Standards?

- Did the auditor disclose all significant deficiencies and material weaknesses that were found in the internal control in the auditor's report?

- Are the disclosure notes to the report adequate? At a minimum, the following should be disclosed:

    + description of the company,
    + basis of accounting,
    + description of accounting policies,
    + description of indirect cost rate structure,
    + single or multiple base,
    + dual rate for field and home office,
    + other direct costs consistently charged,
    + cost allocation policies,
    + description of labor-related costs,
    + project labor,
    + variances,
    + paid time off,
    + paid overtime and uncompensated overtime,
    + highly compensated employees,
    + pension/deferred compensation/employee stock option plans,
    + contract labor,

+ description of depreciation/leasing policies,
+ related party transactions,
+ facilities capital cost of money,
+ list of executives/principals, and
+ list of direct cost accounts and amounts.

- Does the Indirect Cost Statement Report contain a statement of costs presented, adjustments and allowed costs per audit, and explanations of the adjustments?

For a cognizant indirect cost rate review, the Internal Audit Unit concentrates on those items in the above list that most impact the indirect cost rate.

Upon receipt of the Internal Audit Unit's findings, the Administrative Assistant in the Consultant Design Bureau will distribute the reply to the Consultant Design Engineer, the Consultant Plans Engineer, the applicable CPE, the master contract file and the indirect cost rate audit file. The Administrative Assistant will update the Consultant Information System (CIS) within five working days.

The Consultant Design Bureau does not submit the recommendation from the Internal Audit Unit to the Consultant. The Consultant Design Engineer will independently evaluate if the Internal Audit Unit recommendation is appropriate. In cases where the Consultant Design Engineer disagrees with the Internal Audit Unit recommendation, the Consultant Design Engineer will meet with the Internal Audit Unit to resolve the issue(s).

11.1.3 Contract Compliance Audit

11.1.3.1 Objective

Each year, the Internal Audit Unit selects a sample of MDT Consultant contracts (approximately 5 to 10) for a contract compliance audit. MDT uses a risk-based selection process based on several factors, typically size of the contract, number of amendments, etc. Contract compliance audits are performed at the Consultant's home office. The objective of these audits is to examine specific MDT Consultant projects to determine if the costs incurred (and charged to MDT) on that project meet the terms of the contract. For a contract compliance audit, the Internal Audit Unit uses all of the items listed in Section 11.1.2 to check every direct cost charged to the contract for compliance, and the Unit checks for compliance with all contract provisions. The Internal Audit Unit will prepare a report on its review, which is submitted to the Consultant Design Engineer for a final determination. The report will be incorporated into the MDT Consultant Information System (CIS).

11.1.3.2 Approval/Appeal

After the Internal Audit Unit has completed the contract compliance audit report, the following outlines the steps and timelines that apply to processing the report:

1. Audit Findings Conference. After the Final Audit Report has been approved by the Chief Human Resources Officer and Chief Administrative Officer, an Audit Findings Conference will be held with the Consultant, Consultant Design Engineer, and Internal Audit Unit Manager or designee. The Consultant is presented with a copy of the Final Audit Report and the audit is explained. The intent of the Audit Findings Conference is to explain to the Consultant the findings of the Final Audit and answer questions regarding the audit. It is not the intent of the Audit Findings Conference to discuss or dispute any portion of the Final Audit. The Audit Findings Conference may be held at MDT Headquarters or via teleconference.

2. Consultant Acceptance. If the Consultant accepts the Final Audit Report and:

   a. MDT owes the Consultant money, MDT will submit payment to the Consultant within 20 working days of receiving written notification from the Consultant.

   b. The Consultant owes MDT money, the Consultant will submit payment within 20 working days of the Audit Findings Conference to:

      Head Cashier – Collections Section
      Montana Department of Transportation
      2701 Prospect Ave.
      P.O. Box 201001
      Helena MT 59620-1001

3. Consultant Appeal. If the Consultant disputes the Final Audit Report or any portion thereof, written notification must be sent to the Consultant Design Engineer stating that it is initiating the appeal process. The following applies:

   a. If notification is not received within 10 working days from the date the Audit Findings Conference was held, the Consultant has lost the right to appeal the audit and 2(a) or 2(b) will apply, as applicable.

   b. If a request for appeal is received after the 10 working day timeline, the Consultant will be notified of the lost of appeal rights by a letter sent from the Consultant Design Engineer via certified mail.

4. Informal Hearing. If written notification of appeal has been received within the 10 working day timeline, the Consultant Design Engineer will schedule an Informal Hearing to occur within approximately 30 working days of receiving the Consultant's request for appeal. The following applies:

   a. The Consultant, Consultant Design Engineer, Internal Audit Unit Manager or designee, Chief Operations Officer, Highways & Engineering Division Administrator and Preconstruction Engineer will attend the Informal Hearing.

b. Following the Informal Hearing, the Chief Operations Officer, Highways & Engineering Division Administrator and Preconstruction Engineer will jointly issue a decision to the Consultant Design Engineer.

c. A written notification of the decision will be issued by the Consultant Design Engineer and transmitted to the Consultant via certified mail within 20 working days of the Informal Hearing.

d. If the Consultant accepts the decision resulting from the Informal Hearing, 2(a) or 2(b) will apply, as applicable.

5. Consultant Dispute. If the Consultant disputes the decision resulting from the Informal Hearing, written notification must be sent to the Consultant Design Engineer citing specific points of disagreement. The following applies:

   a. If notification of a dispute is not received within 10 working days from the date of the Informal Hearing decision letter, the Consultant has lost the right to appeal the audit and 2(a) or 2(b) will apply, as applicable.

   b. If a notification of dispute is received after the 10 working day timeline, the Consultant will be notified of the lost appeal rights by a letter sent from the Consultant Design Engineer via certified mail.

6. Formal Hearing/Final Resolution. If a written notification of dispute has been received within the 10 working day timeline, the Consultant Design Engineer will schedule a Formal Hearing to occur within approximately 30 working days of receiving the Consultant's notification of dispute. The following applies:

   a. The Consultant, Consultant Design Engineer, Internal Audit Unit Manager or designee, Deputy Director and/or Director will attend the Formal Hearing.

   b. Following the Formal Hearing, the Deputy Director and/or Director will jointly issue a final decision to the Consultant Design Engineer.

   c. A written notification of the decision will be issued by the Consultant Design Engineer and transmitted to the Consultant via certified mail within 20 working days of the Formal Hearing. This decision will be considered final.

11.1.4 MDT Application of National References

Section 11.4 briefly describes several of the major national references that pertain to accounting and auditing for Consultant projects. The following documents the MDT application of each reference:

1. FAR. It is mandatory that all Consultants retained by MDT comply with 48 CFR Part 31 of the FAR requirements, including the determination of an indirect cost rate on all Federal-aid projects.

2. Federal Highway Administration. MDT must meet the requirements of 23 CFR Part 172 for Consultant selection and negotiation for all Federal-aid projects. Specifically for audits, see 23 CFR 172.7 which, for indirect cost rates, mandates the use of 48 CFR Part 31 of FAR. FHWA requires the application of these indirect cost rates to contract estimates, negotiations and payment. Further, 23 CFR 172.7(b) states that indirect cost rates shall not be limited by any administrative or de facto ceilings established internally by a State DOT.

3. Government Auditing Standards. MDT has mandated the application of the *Government Auditing Standards* (also known as the *Yellow Book*) to audits performed on Consultants retained by the Department. This publication presents the Generally Accepted Government Auditing Standards (GAGAS).

4. AASHTO Uniform Audit and Accounting Guide. The governing regulations for MDT audits include FAR, 23 CFR Part 172 and GAGAS. However, the AASHTO *Uniform Audit and Accounting Guide* discusses how these regulations specifically apply to Consultants hired by State DOTs. Therefore, the *Guide* is a valuable resource to the MDT Internal Audit Unit in its audit of MDT Consultants.

5. AICPA Professional Standards. The AICPA *Professional Standards* serves as a resource to MDT for Consultant audits and is used in conjunction with the Generally Accepted Government Auditing Standards (GAGAS), which incorporates portions of AICPA's financial audit standards into the GAGAS standards.

6. FASB Accounting Standards. The FASB *Accounting Standards* serves as a resource to MDT auditors for Consultant audits.

11.2 INDIRECT COST RATE AUDIT REQUIREMENTS

The MDT Standard Agreement, which is discussed in Chapter 12, presents MDT policies on indirect cost rates used by Consultants on MDT projects. Section 11.2 presents additional information on these policies.

11.2.1 Contract Value

The following presents the MDT policy for requiring a FAR indirect cost rate audit:

- If the contract value exceeds $100,000, then the Consultant must submit an Indirect Cost Rate Audit Report prepared by an authorized external entity (e.g., independent CPA firm, cognizant government agency).
- If the contract value is $100,000 or less, then the Consultant must submit its internal calculations on its indirect cost rate with a certification from the Consultant that the calculation meets all applicable FAR requirements.
- If the Consultant has an accepted audited indirect cost rate, the rate must be provided to MDT.
- The Consultant is required to certify their audited and unaudited indirect cost rate (as applicable) by using the Certification of Indirect Cost Form located on the MDT internet website (see Figure 11.2-A).

The original contract value may be less than $100,000 and, based on the above, MDT will not initially require an audited indirect cost rate. However, a subsequent Contract Amendment may increase the total contract value to more than $100,000. In this case, MDT will not execute the Contract Amendment until the Consultant has met the MDT audit requirements to ensure compliance with FAR.

If the potential value of a Term Contract exceeds $100,000, then the requirement for an audit to ensure compliance with FAR applies, even though MDT does not guarantee the Consultant that the Department will issue Term Assignments to the Consultant that will exceed $100,000.

Prime consultants and subconsultants providing non-engineering professional services (e.g., cultural work, noise studies) with a cumulative contract value of less than $100,000, measured on a per contract basis, will not be required to obtain an audited indirect cost rate. Firms that have current audited indirect cost rates available will be required to provide them.

CERTIFICATION OF INDIRECT COSTS

Firm Name: _____

Indirect Cost Rate : _____

Fiscal Period Covered: _____ to _____

I, the undersigned, certify that I have reviewed the proposal to establish the indirect cost rate(s) for the fiscal period as specified above and to the best of my knowledge and belief:

1. All costs included in this proposal to establish the indirect cost rate(s) are allowable in accordance with the cost principals of the Federal Acquisition Regulations (FAR) of title 48, Code of Federal Regulations (CFR), part 31.
2. This proposal does not include any costs which are expressly unallowable under the cost principles of the FAR of 48 CFR 31.

All known material transactions or events that have occurred affecting the firm's ownership, organization and indirect cost rate(s) have been disclosed. I agree to immediately notify MDT of any changes that may affect the indirect cost rate(s).

Signature: _____

Name of Certifying Official: _____

Title (must be V.P., CFO, or higher): _____

Date of Certification: _____

CERTIFICATION OF INDIRECT COSTS

Figure 11.2-A CERTIFICATION OF INDIRECT COST FORM

11.2.2 Timing

The fiscal year for most Consultants is based on the calendar year. Generally, unless stipulated otherwise by the Consultant Design Engineer, MDT will accept an audited indirect cost rate up to six months after the close of the Consultant's fiscal year. For example, an external audit for CY 2007 is acceptable to MDT until June 30, 2009. However, in this example, if the 2008 audited indirect cost rate is available, then the 2008 rate must be used.

11.2.3 Limiting of Indirect Cost Rate

As required by 23 CFR 172.7(b), MDT does not establish a "cap" on the indirect cost rate calculated from an audit to ensure compliance with FAR. The Consultant can elect to use a lower indirect cost rate, which must be submitted in writing.

11.2.4 Provisional Rate

Scheduling and performing an audit to ensure compliance with FAR can require considerable time. Therefore, if a selected Consultant does not have an audited indirect cost rate that meets the timing requirements in Section 11.2.2, MDT may accept a provisional indirect cost rate to not delay the start of work. The Consultant will propose a good-faith rate (with supporting documentation) and, if accepted by MDT, the provisional rate will be used by the Consultant to submit monthly invoices to the CPE.

The Consultant must provide, within six months following the execution date of the contract, an audit to ensure compliance with FAR, and the Consultant must provide the documentation to MDT within two weeks of its availability. The Internal Audit Unit will conduct its normal review and issue its recommendations. Once MDT has accepted the audited indirect cost rate, on the next applicable monthly invoice, the Consultant will make any necessary adjustments to all previous invoices.

The provisional indirect cost rate will be used to establish the total contract value during contract negotiations. This maximum contract value will not be altered based on the final rate accepted by MDT.

11.2.5 Subconsultants

All subconsultants with a cumulative contract value of less than $100,000, measured on a per contract basis, will not be required to obtain an audited indirect cost rate. Subconsultants will be required to submit supporting documentation to substantiate that their indirect cost rate has been calculated in accordance with FAR and applicable CFRs. The report does not need to be audited. Firms that have current audited indirect cost rates available will be required to provide them.

All MDT audited indirect cost rate requirements for prime Consultants also apply to subconsultants. This includes all reporting requirements to MDT.

11.2.6 Independent Contractors

As discussed in Section 11.3.4.9, Consultants may use independent contractors to provide services to a Consultant that is negotiating a contract with MDT. The Consultant will propose the hours and an hourly rate for the independent contractor for project implementation. In general, MDT must render a judgment that the proposed hourly rate is reasonable and customary based on the independent contractor's skills and experience. MDT policy for support of the hourly rate is as follows:

- If the total compensation for the independent contractor will be less than $20,000, MDT does not require support for the hourly rate.

- If the total compensation for the independent contractor will be $20,000 or more, MDT will require support for the hourly rate. The independent contractor must segregate the hourly rate into a direct labor, indirect cost and fee component, based on a rational, supportable method to segregate the costs.

11.2.7 Indirect Cost Rate Application to Contracts

As stated in the Standard Agreement, the Consultant must select one of the following approaches at the time of Consultant signature on the contract:

- The indirect cost rate approved by MDT will remain fixed throughout the contract duration. Any time the contract completion date is extended, the consultant will required to utilize their current overhead rate if one is available. "Available" means the Consultant has calculated their overhead rate and, when applicable, had it audited. If the overhead rate is not available, the Consultant may choose to provide a current rate (calculated or audited as appropriate) or continue use of their existing accepted rate for the contract (even if the overhead rate is expired). If the Consultant chooses to continue use of their existing accepted rate for the contract, but the rate has expired, the rate will be considered a negotiated rate.

  The requirement will apply each and every time the completion date is extended regardless of how much contract time has elapsed nor how many times the completion date has been extended. There should be only one applicable overhead rate for each contract.

- The indirect cost rate will be adjusted annually based on MDT audit requirements. The newly established indirect cost rate will be effective beginning with the month after it is received by the Department.

Once the Consultant has made its selection, this becomes an irrevocable decision on its indirect cost rate under the Agreement.

In addition, any subconsultants are required to accept the approach selected by the prime Consultant.

11.2.8 Vendor-Type Services

MDT does not require an indirect cost rate for vendor-type services, including:

- printing and binding,
- traffic data collection, and
- traffic control devices.

These types of services are normally solicited on a unit-price or total-cost basis that is customary for the type of service. In most cases, vendor-type services will be included as a subcontractor to a prime Consultant.

11.2.9 Negotiated Indirect Cost Rates

MDT has the option to negotiate an indirect cost rate rather than require an indirect cost rate. Examples include where:

- The Consultant has only recently gone into business.
- The Consultant has only recently established an acceptable accounting system.

- The Consultant has recently realized a significant change in its business practices.
- The Consultant's definitions of its fiscal year has recently changed.

In these cases, MDT's objective will be to negotiate a mutually acceptable indirect cost rate that is fair and reasonable. The Consultant will provide MDT with documentation that supports the proposed indirect cost rate whenever possible. When negotiating the rate, MDT will consider the reliability of the documentation provided, the estimated value of the services to be rendered, and the comparative closeness of the proposed rate to the average indirect cost rate for Consultants.

11.2.10 Timely Submission of Audit Data

The Consultant is required to submit audit data in a complete and timely manner. The documentation must be submitted to MDT within two weeks of the audit date.

11.2.11 Other Issues

Occasionally, other issues related to indirect cost rates arise. The following briefly discusses two of these.

11.2.11.1 Cognizant Agency/Cognizant Audits

The 1995 *National Highway System Designation Act* addresses the avoidance of duplicate audits through the introduction of the term "cognizancy." This term provided the groundwork for State DOTs to be required to use the work of others if an indirect cost rate audit had been previously performed by a "cognizant agency." The AASHTO Audit Subcommittee and the ACEC Transportation Committee has adopted the following definitions:

1. A "Cognizant Agency" is any one of the following:

    - Federal agency.
    - The Home State Transportation Department (i.e., State where the firm's accounting and financial records are located).
    - A Non-Home State Transportation Department to whom the Home State has transferred cognizance in writing for the indirect cost rate audit of a firm.

2. A "Cognizant Audit" is achieved by any one of the following methods:

    - A Cognizant Agency performs or directs the work of a CPA who performs the indirect cost rate audit.
    - Non-Home State auditors, or CPAs working under this State's direction, issue an audit report and the Home State issues a letter of concurrence.
    - An indirect cost rate audit performed by a CPA hired by the firm will become a cognizant audit if one of the following conditions is met:

        + The Home State reviews the CPA's working papers and the Home State issues a letter of concurrence with the audit report.
        + A Non-Home State reviews the CPA's working papers and issues a letter of concurrence with the CPA report, which is then accepted by the Home State.

11.2.11.2 Field Office Indirect Cost Rates

A field office indirect cost rate is not typically required from Consultants. When required or proposed, the following applies to segregating the company-wide indirect cost rate into home office and field office rates:

1. Home Office Indirect Cost Rate. A rate that excludes field office expenses (e.g., field office direct labor, direct costs, overhead and support services allocations).

2. Field Office Indirect Cost Rate. A rate that applies to field office work where facilities are being provided or paid for by MDT over a period of time. The field office rate may be used for construction engineering, construction inspection and other projects as approved by MDT. Because the Consultant's field office employees are not working out of their own offices and are not receiving office support in their day-to-day activities, the hours billed for them may not qualify for the Consultant's full indirect cost rate. The purpose of the field rate is to pay the Consultant for the fringe benefits and home office support they do provide to their field employees.

11.3 BASIC ACCOUNTING CONCEPTS

This Section presents basic accounting concepts, especially those that apply to indirect cost rate audits. These should be of interest to the Consultant Design Bureau staff, especially Consultant Project Engineers when negotiating contracts (Chapter 7), administering Consultant projects (Chapter 8) and interfacing with the Internal Audit Unit.

11.3.1 Definitions

The following basic definitions apply to accounting:

1. Actual Costs. Amounts determined on the basis of cost incurred and supported by original source documentation, as compared to forecasted costs, or costs thought to have been incurred, or costs based on historical averages.

2. Agreement. A contract. A binding, legal document that identifies the deliverable goods and services being provided, under what conditions, and the method of payment for such services.

3. Allocable. A cost is allocable (to an agreement or cost of work being performed for the government) if it benefits both the agreement and other work of the firm and the cost can be distributed in reasonable proportion to the benefits of incurring that cost.

4. Allowable Cost. An item of cost that can be billed directly as a project cost or indirectly as an indirect cost by the Consultant.

5. Billing Rate. The billing rate generally refers to the hourly labor rate being charged for work on an agreement. For a cost-plus-fixed-fee agreement, the billing rate will be the employee's actual payroll rate. For an all-inclusive hourly rate agreement, the billing rate will include the actual payroll rate plus an indirect cost percentage plus an amount for fee.

6. Cost Accounting Standards. Cost Accounting Standards (CAS) are the rules, regulations and standards that are promulgated by the Cost Accounting Standards Board (CASB). The CASB is located within the Office of Federal Procurement Policy, which is under the direction of the Office of Management and Budget (OMB) of the Federal government.

7. Cost Center. Cost centers are used to accumulate and segregate costs.

8. Cost Principles. The underlying basis for determining how costs should be recorded when they are allowable or unallowable, and the specific basis for treating various costs as either allowable or unallowable.

9. Direct Cost. Any cost than can be attributed to a specific, final cost objective; i.e., a project-related cost. Direct costs include labor, materials and reimbursables incurred

specifically for an agreement. It is irrelevant whether or not the costs are actually billed; i.e., all costs for lump-sum agreements must be included in direct costs.

10. Facilities Capital Cost of Money (FCCM). An imputed cost factor that allows for investment in building and equipment. The resulting FCCM rate is not a form of interest on borrowing. The FCCM factor is determined by calculating the average net book value of the firm's capital assets (i.e., land, buildings, equipment) for the fiscal year and multiplying this amount by the cost of money rate.

11. Finding. A statement of noncompliance with the terms of an agreement. A finding includes the condition, criteria, cause, effect and a recommendation for correction.

12. General Administrative Expenses. Any management, financial and other expense that is incurred by or allocated to a business unit, and which is for the general management and administration of the business as a whole.

13. Generally Accepted Auditing Standards (GAAS). These are standards for financial statement audits set forth by the American Institute of Certified Public Accountants. The standards pertain to auditors' professional qualifications, the quality of audit effort, and the characteristics of professional and meaningful audit reports.

14. Generally Accepted Government Auditing Standards (GAGAS). These are standards for audits of government organizations, programs, activities and functions, and of government assistance received by contractors, non-profit organizations and other non-government organizations. These standards also incorporate GAAS for financial-related audits.

15. Indirect Cost. Any cost not directly identified with a single, final cost objective, but identified with two or more final cost objectives or an intermediate cost objective. Consultants recover their indirect costs in their indirect cost rate.

16. Indirect Cost Rate. A computed rate (also called an "overhead rate") usually developed by adding together all of a firm's costs that cannot be associated with a single-cost objective (i.e., "indirect" costs), including general and administrative costs and fringe benefit costs, then dividing by a base value, usually direct labor dollars, to obtain a percentage. This rate is applied to direct labor to allow a firm to recover the share of indirect costs allowable to the agreement.

17. Internal Control. The plan of organization and methods and procedures adopted by management to ensure that its goals and objectives are met; that resources are used consistent with laws, regulations and policies; that resources are safeguarded against waste, loss and misuse; and that reliable data are obtained, maintained and fairly disclosed in reports.

18. Overhead Rate. See "Indirect Cost Rate." The two terms are used interchangeably.

19. Provisional Hourly Rate Agreement. An agreement in which hourly billing rates that include labor, indirect costs and fee are negotiated in advance, but are subject to adjustment after an audit determines actual labor and indirect rates.

20. Record of Negotiation. A summary memorandum prepared by the contracting officer regarding the reconciliation between the Consultant's proposal and the MDT estimate. It includes contract rate negotiations, disposition of significant matters in the pre-award audit report and, if applicable, reasons why audit recommendations were not followed. It is required by 48 CFR 42.706(b).

21. Source Documentation. Original documents, including but not limited to time sheets, invoices, hotel receipts, rental slips, gasoline tickets, canceled checks, tax returns, insurance policies, minutes of corporate meetings, etc., that support the costs recorded in the firm's accounting ledgers.

22. Unallowable Cost. An item of cost that cannot be billed directly or indirectly by a Consultant. These types of costs, if found during an audit, will be purged from the costs billed directly or from those billed indirectly via an indirect cost rate.

11.3.2 Consultant Responsibilities for Accounting System

The following briefly discusses the responsibilities of Consultants for their accounting system.

11.3.2.1 Prepare Timely and Accurate Financial Information

Consultants performing work for MDT and other government agencies are responsible for preparing timely, accurate financial information in accordance with government accounting standards. This includes:

- Schedule of Indirect Costs,
- Financial Statements, and
- Disclosures.

The MDT Internal Audit Unit may evaluate the firm's compliance with these standards when performing an audit for compliance with the contract.

11.3.2.2 Maintain Effective Internal Control Structure

Consultants performing work for MDT and other government agencies are responsible for maintaining effective internal control structures in accordance with government accounting standards and written internal policies and procedures. Key elements of internal controls include:

1. Systems for Monitoring Compliance. The Consultant must be able to document its compliance with government accounting and auditing requirements (e.g., compliance with 48 CFR Part 31).

2. Estimating System and Preparation of Proposals. The Consultant must be able to demonstrate that it has the required estimating system process in place to ensure that reliable cost estimates support contract proposals; that cost data is accurate, current and complete; and that the overall estimating process is consistent with well-documented practices and policies in place.

3. Cost Accounting, Timekeeping and Invoicing Systems. The Consultant must be able to demonstrate that it has the required cost accounting, time-keeping and invoicing systems critical for government contracting. Maintaining effective controls ensures that:

   - Costs are accurately allocated to cost objectives, are reasonable and in accordance with contract requirements.
   - Unallowable costs are identified and segregated.
   - Cost allocation practices are reasonable and follow required government accounting practices.
   - Costs incurred on projects are periodically reconciled to financial statements.

4. Accounting for Labor. The Consultant must be able to demonstrate that it has an effective system of internal control over the labor-charging/time-keeping function. The Consultant should have procedures ensuring that labor hours are accurately recorded including any corrections to timesheets. Such procedures shall also ensure that the total labor dollars reflected in labor distribution summaries agree with the total labor charges as entered in the time-keeping and payroll systems.

11.3.3 Cost Principles

11.3.3.1 General

The *Federal Acquisition Regulations* (FAR) contains cost principles and procedures for pricing contracts, subcontracts and amendments to contracts. The following is a general discussion of applicable cost principles described in Part 31 of FAR as it may interest CPEs. Rate structures and cost allocation methods must be consistent for all Federal and State government contracts.

11.3.3.2 Allowable

The total cost of a contract includes all costs properly allowable to the contract under the specific contract provisions. One important criteria is “reasonableness.” A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person

in the conduct of competitive business. The reasonableness of specific costs is not always easy to determine because such a determination depends to some extent on judgment and interpretation of FAR. Costs that are unallowable must be identified and excluded from any billing, claim or proposal applicable to a government contract.

11.3.3.3 Allocable

To be allowable, a cost must also be allocable; i.e., it must be assignable or chargeable to one or more cost objectives or cost centers on the basis of relative benefits received or some other equitable relationship. A cost is allocable to a government contract if it:

- is incurred specifically for the contract;
- benefits both the contract and other work, and can be distributed in reasonable proportion to the benefits received; or
- is necessary to the overall operation of the business, although a direct relationship to any particular cost objective cannot be shown.

11.3.3.4 Indirect Costs

Indirect costs should be accumulated by logical cost groupings with due consideration of the reasons for incurring such costs. A distribution base common to all cost objectives or projects is selected for allocation of an indirect cost pool. Most Consultants use direct labor as the base for developing indirect cost rates.

A cost cannot be charged as direct and also be included in any indirect cost pool. However, small-dollar direct cost items may be treated as an indirect cost if the accounting treatment is consistently applied to all projects and produces substantially the same results as treating the cost as a direct cost.

The base period for most Consultant's indirect cost rates will normally be the firm's fiscal year (e.g., January to December or July to June). For MDT projects, an agreed upon rate may be used over the duration of the contract. See Section 11.2.7.

11.3.4 Cost Accounting

11.3.4.1 Allocation Bases

An allocation base is the means by which indirect costs are distributed to final cost objectives. There are a variety of allocation bases that are commonly used in cost accounting systems for allocating indirect costs. Whatever base is used for cost allocation, it must be consistent for all government contracts.

Direct labor cost is the most common base used by Consultants to allocate indirect costs on MDT contracts. Direct labor costs are generally all project hours multiplied by labor rates and summarized for all employees within the applicable allocation unit.

11.3.4.2 Cost Centers

Cost centers are established to accumulate and segregate costs. The functional cost center method segregates costs unique to a business activity, typically for direct costing. Another method is focused on the corporate structure. Some examples of cost centers used for accumulating costs are groupings of regional offices, specific subsidiaries, affiliates, divisions or field offices.

11.3.4.3 Allocated Costs

These include the following:

1. Fringe Benefits. Fringe benefits are the costs associated with the business' portion of payroll taxes and benefits in employment. Such costs generally include payroll taxes, pension plan contributions, medical insurance costs, life insurance and employee welfare expenses.

2. Indirect Costs. These costs are those that may benefit or are associated with two or more business activities, but are not specifically allocated to an activity for reasons of practicality. Indirect costs differ from general and administrative costs (see Item #3) in that these costs can be associated with a cost center based on benefit. Some examples of indirect costs are rent, depreciation, employee recruitment and training, and general or professional insurance policy costs.

3. General and Administrative Costs. This expense generally is all costs associated with the entire business' operation, which cannot be specifically identified with a smaller unit of business activities. For example, certain management or administrative costs that are incurred for an entire business unit may be considered G&A, but other accounting or legal costs benefiting a segment of the business may be considered part of the overhead pool of that specific segment.

4. Computer/CADD Costs. Generally, this pool includes costs such as equipment depreciation or rental; software including license costs; employee training costs on new software; equipment maintenance; cost of special facilities or locations; and systems development labor or support costs.

5. Company Vehicles. Company vehicles are cars, survey trucks and vans that may be used for a direct or indirect cost objective. Pooled costs may include depreciation, lease costs, maintenance, insurance and operation costs such as fuel.

6. Equipment. Costs accumulated to this pool are similar to both computer and company vehicle pools. Company equipment can be a wide variety of items that are used in various activities.

7. Printing/Copying/Plan Reproduction. Costs in this pool are generally associated with reproduction from a single page copied to multiple prints of large specialized drawings or blue prints.

11.3.4.4 Direct Labor

Direct labor costs are usually the most significant costs incurred in the performance of government contracts. Incurred labor costs form the basis for estimating labor for future contracts. It is, therefore, imperative that Consultants establish and maintain an effective system of internal control over the labor-charging function.

Unlike other items of cost, labor is not supported by external documentation or physical evidence to provide an independent check or balance. The key element in any labor-charging system is the individual employee. It is critical to internal control systems that management fully indoctrinate employees on their independent responsibility for accurately recording time charges. This is the single most important feature management can emphasize in recognizing its responsibility to owners, creditors and customers to guard against fraud, waste and significant errors in the labor-charging functions.

An adequate labor accounting system, manual or electronic, will create an audit trail whenever an employee creates a timesheet entry. A system that allows an audit trail to be destroyed is inadequate because the integrity of the system can be easily compromised. The Consultant should have policies and procedures for training employees to reasonably assure that all employees are aware of the importance of proper time charging.

11.3.4.5 Uncompensated Overtime

Policies on compensating for work in excess of 40 hours per week varies among Consultant firms. In many cases, for salaried employees, this is considered uncompensated overtime. Therefore, MDT policy is that Consultants cannot bill the Department for uncompensated overtime. However, the Consultant should have procedures to ensure that all hours worked are recorded, whether they are paid or not, to ensure the proper distribution of labor costs. This is necessary because labor rates and labor indirect costs can be affected by total hours worked, not just paid hours worked.

11.3.4.6 Compensated Overtime

Consultants should have the capability of maintaining records that segregate compensated overtime amounts as direct or indirect costs, especially when a “premium” is paid to employees for overtime; see Section 11.3.4.7. An acceptable method is to charge overtime as a direct cost

when it is the Consultant's regularly established policy and when appropriate tests demonstrate that this policy results in equitable cost allocations.

MDT policy is that Consultant employees can charge overtime to a MDT contract without MDT approval if the rate of pay for the compensated overtime is at the regular pay rate (i.e., there is no premium pay).

11.3.4.7 Premium Pay for Overtime

Premium pay refers to Consultant employee pay for overtime at a rate higher than the regular pay rate. The Consultant must have prior, written approval from the Consultant Design Engineer before the Consultant can pay an employee a premium for overtime and bill the Department at the premium rate.

11.3.4.8 Internal Controls for Labor

The Consultant should have procedures to ensure that labor hours are accurately recorded and that any corrections to time-keeping records are documented, including appropriate authorizations and approvals.

The Consultant should have procedures requiring that the total labor dollars reflected in labor distribution summaries agree with the total labor charges as entered in the time-keeping and payroll systems. This reconciliation ensures that the labor charges to contracts represent actual paid or accrued costs and that such costs are appropriately recorded in the accounting records.

11.3.4.9 Contract Labor

In some cases, firms contract for services provided by engineers, technicians, etc., rather than hire these individuals as employees. This is commonly referred to as "contract labor," and these individuals are referred to as "independent contractors." The accounting treatment varies, depending on the circumstances under which the purchased labor costs are incurred. Two acceptable methods of accounting for this labor are:

- charged as a direct cost to projects, or
- treated as other labor (direct or indirect as appropriate).

Contract labor must share in an allocation of indirect expenses where such a relationship exists, and the allocation method must be consistent with the Consultant's accounting practices. A separate allocation base for contract labor may be necessary to allocate significant costs to contract labor (e.g., supervision and occupancy costs) or to eliminate other costs (e.g., fringe benefits) that do not benefit contract labor.

11.3.4.10 Other Direct Costs

Other direct costs typically include subcontracts, travel, long-distance phone calls and outside printing. Costs based on charge-out rates developed by the company, typically mileage and copying, are addressed in Chapter 7. To be treated as a direct cost, the item must have been needed for and used on that job; i.e., "but for this job," the cost would not have been incurred. All similar costs must be treated as direct costs.

11.4 NATIONAL REFERENCES

This Section presents a brief description of the major national publications used by the Internal Audit Unit as a reference to assist in determining compliance with State and Federal laws and regulations. Section 11.1.4 presents the application of each publication to MDT operations.

11.4.1 *Federal Acquisition Regulations*

The *Federal Acquisition Regulations* (FAR) is the primary, authoritative source for the acquisition of supplies and services by government agencies. In particular, Part 31 "Contract Cost Principles and Procedures" has special application to the MDT Consultant Program because it establishes the cost principles and procedures for:

- the pricing of contracts, subcontracts and amendments to contracts when a cost analysis is performed;
- the determination, negotiation or allowance of costs when required by a contract clause; and
- detailed explanations of specific rules for allowable and unallowable costs.

11.4.2 Federal Highway Administration

The governing FHWA legal requirement for the solicitation, negotiation and management of professional service contracts is 23 CFR Part 172 "Administration of Engineering and Design Related Service Contracts." The Part 172 policies and procedures apply to Federally funded contracts and have been issued to ensure that a Consultant is selected through an equitable selection process, and that the work is properly accomplished in a timely manner and at fair and reasonable cost. 23 CFR Part 172 discusses methods of procurement, audits and approvals.

11.4.3 *Government Auditing Standards ("Yellow Book")*

The professional standards and guidance contained in the *Yellow Book*, commonly referred to as the Generally Accepted Government Auditing Standards (GAGAS), provide a framework for conducting government audits with "competence, integrity, objectivity and independence." The Comptroller General of the United States publishes the GAGAS. These standards are for use by auditors of entities that receive government awards. Audits performed under GAGAS provide information used for oversight, accountability and improvements of government programs and operations.

11.4.4 AASHTO *Uniform Audit and Accounting Guide*

This *Guide* has been developed by the Audit Subcommittee of the American Association of State Highway and Transportation Officials (AASHTO) with assistance from the American Council of Engineering Companies (ACEC) and FHWA. The AASHTO Audit Subcommittee is comprised of the senior staff member responsible for the audit function for each State DOT.

The purpose of the *Uniform Audit and Accounting Guide* is to provide a tool that can be used by individual State auditors, Consultant firms and CPA firms that audit Consultant firms. The primary focus of the *Guide* is auditing and reporting on the indirect costs and resultant indirect cost rates of Consultants who perform engineering-related work for State DOTs.

This *Guide* is not intended to be an auditing procedures manual but, rather, a guide that will assist individuals in understanding terminology, policies, audit techniques and sources for regulations and specific procedures.

11.4.5 AICPA *Professional Standards*

The American Institute of Certified Public Accountants (AICPA) *Professional Standards* provides audit guidance, techniques and reporting standards that apply to audits of non-public companies (e.g., Consultant firms) by certified public accountants.

The International Standards for the Professional Practice of Internal Auditing (IIA Standards) provide guidance for the conduct of internal auditing at both the organizational and individual auditor levels. They are the result of careful study, consultation and deliberation on the basic principles for providing internal audit services.

11.4.6 FASB *Accounting Standards*

The Financial Accounting Standards Board (FASB) *Accounting Standards* is an integration of currently effective accounting and reporting standards. Material is drawn from AICPA Accounting Research Bulletins, APB Opinions, FASB Statements of Financial Accounting Standards and FASB Interpretations. Although its focus is primarily publicly traded corporations, some of the material may be helpful to government auditors.

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Chapter 12
CONTRACT PROVISIONS

Chapter 12 briefly discusses selected provisions that are included in contracts between MDT and Consultants. The objective is to provide Consultant Project Engineers and the Consultant community with some elaboration on the purpose and implementation of these selected provisions.

12.1 GENERAL

12.1.1 Description

A contract is a binding agreement between two parties that is based on and enforceable by legal requirements. The contract documents the obligations between the two parties. A contractual relationship is evidenced by:

- an offer,
- acceptance of the offer, and
- valid consideration.

Each party to a contract acquires rights and duties relative to the rights and duties of the other parties. When a dispute over the intent of a contract arises, a fundamental precept is that the written word takes precedence over any verbal understandings.

12.1.2 MDT Standard Agreement

MDT and Consultants enter into a contractual arrangement for the Consultant to provide professional services to the Department. This contract must comply with all Federal and State laws, regulations, etc., that govern the provision of professional services. MDT and the Montana Chapter of the American Council of Engineering Companies (ACEC) have mutually developed a Standard Agreement to:

- meet all governing legal requirements, and
- expedite the process of executing a contract for a specific project.

The Standard Agreement is modified to incorporate the project-specific elements as negotiated between MDT and the Consultant with respect to:

- scope of services,
- schedule, and
- cost.

Chapter 7 discusses in detail the negotiation process used to develop the project-specific elements.

12.2 INSURANCE

12.2.1 General

In general, MDT requires that Consultants under contract secure insurance to cover the types of losses that may result during or from the project. Consultants must provide the necessary certificates of insurance to MDT before contract execution.

12.2.2 Errors and Omissions

12.2.2.1 MDT Philosophy

MDT expects that its Consultants will provide a professional service to the Department that will meet a standard of care as described in the Standard Agreement. Consultant work products should be relatively error free and meet the required standard of care for its profession. When MDT receives products that fail or result in additional construction costs due to a Consultant's error or omission, the Department may hold the Consultant responsible as described in the Standard Agreement. In addition, MDT may require payment from the Consultant for any additional costs (e.g., from a contract change order during construction) incurred by MDT that result from a Consultant's error or omission.

12.2.2.2 MDT Review of Consultant Deliverables

The Standard Agreement states that the Consultant is responsible for the quality of its work products, because "the Department will not make a detailed check of the plans." Sections 2.2.3.3, 3.1.3.1 and 8.3.2 discuss the nature of the MDT technical review.

12.2.2.3 Contract Requirements

For most Consultant projects, MDT requires that Consultants have insurance for errors and omissions (E&O), also known as professional liability insurance. E&O insurance covers Consultants for any damages that they may cause through a negligent act, error or omission. For projects requiring E&O insurance, a Consultant's obligation to indemnify and hold harmless the State for a Consultant's "negligent acts, errors or omissions" is covered in the Standard Agreement. This provision establishes the legal basis for MDT to recover such charges from a Consultant. Per the Standard Agreement, the minimum E&O insurance coverage is $1,000,000. The contract will also specify the time period for which the Consultant must certify that it has fulfilled the project-specific E&O insurance requirements. For example, for a "Project," the time period will normally extend to the completion of construction.

12.2.2.4 Resolution Procedure

When a problem is encountered during construction as a result of errors and/or omissions from plans developed by Consultants, the costs incurred to remedy the situation can become significant. The following presents a Statewide procedure to uniformly address errors and/or omissions from plans developed by Consultants. The objectives of this procedure are to:

- Allow MDT field construction personnel to quickly obtain a solution to construction problems encountered due to errors and/or omissions from plans developed by Consultants.
- Provide a mechanism and process to inform/involve various MDT units and the Consultant at logical times during the resolution period.
- Establish a uniform method to recuperate costs incurred by MDT due to errors and/or omissions on plans developed by Consultants.

The following definitions apply:

1. Errors. Incorrect data shown on the plans or supporting documentation.
2. Omissions. Something neglected or not included with the plans or supporting documentation.
3. Corrective Action. To alter or adjust to improve to an acceptable standard or required condition.

The Construction Engineering Services Bureau, the Consultant Design Bureau and the District Construction Engineer should be contacted immediately by the Project Manager for assistance when these situations arise. This is especially important if resolution is slow in developing and the delay could result in additional costs.

The procedure must be an interactive and iterative process among the field staff, the Consultant and the Consultant Design Bureau. Communication among all parties should occur throughout the procedure. Communication between the Department and the Consultant is intended to provide a good-faith attempt to reach an amicable solution; however, such communication or lack thereof does not preclude the Department from implementation of any solution deemed appropriate.

Figure 12.2-A provides the flowchart for each step of the procedure. The following provides additional information and clarification to the flowchart:

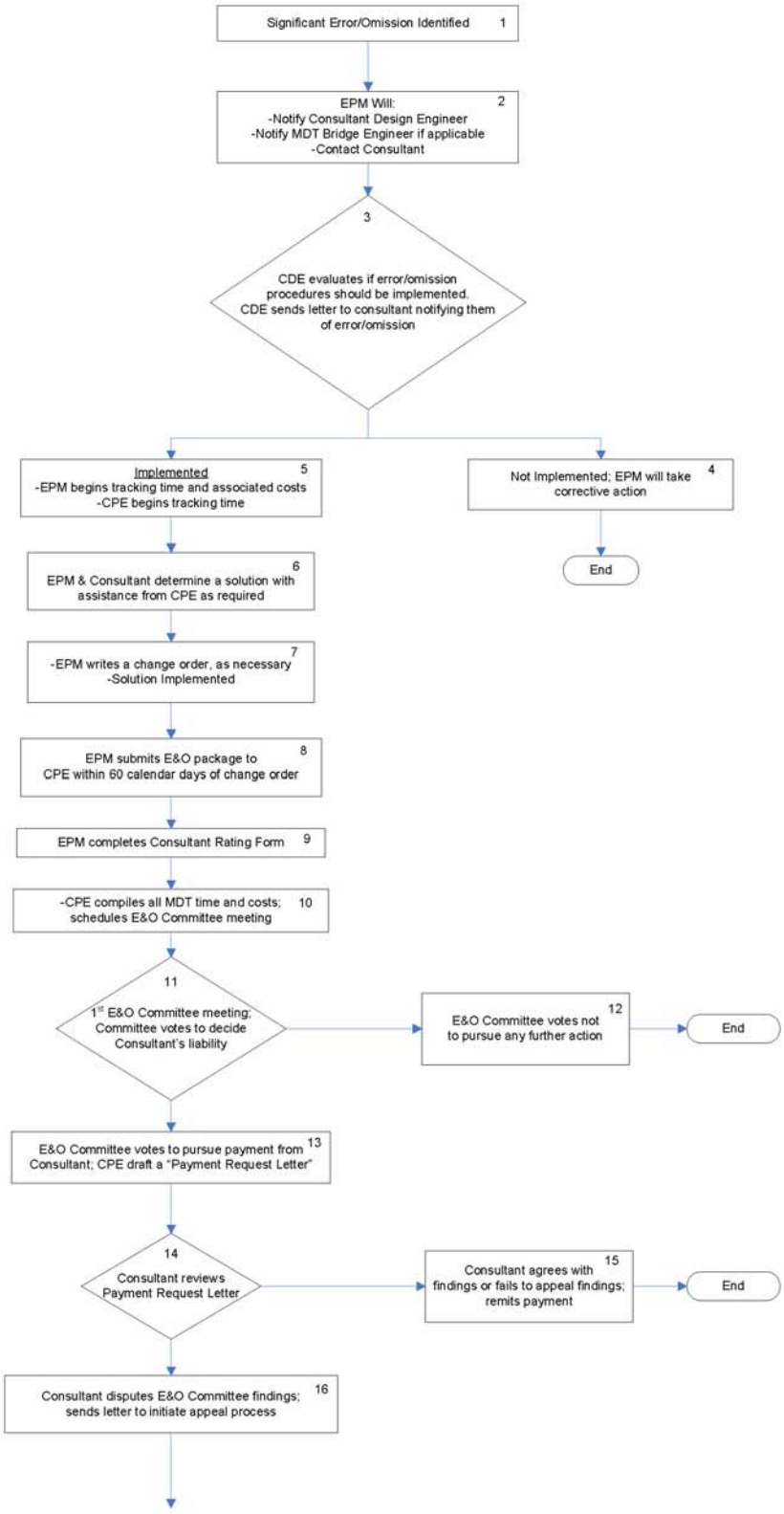

Figure 12.2-A — ERRORS AND OMISSIONS RESOLUTION PROCEDURE

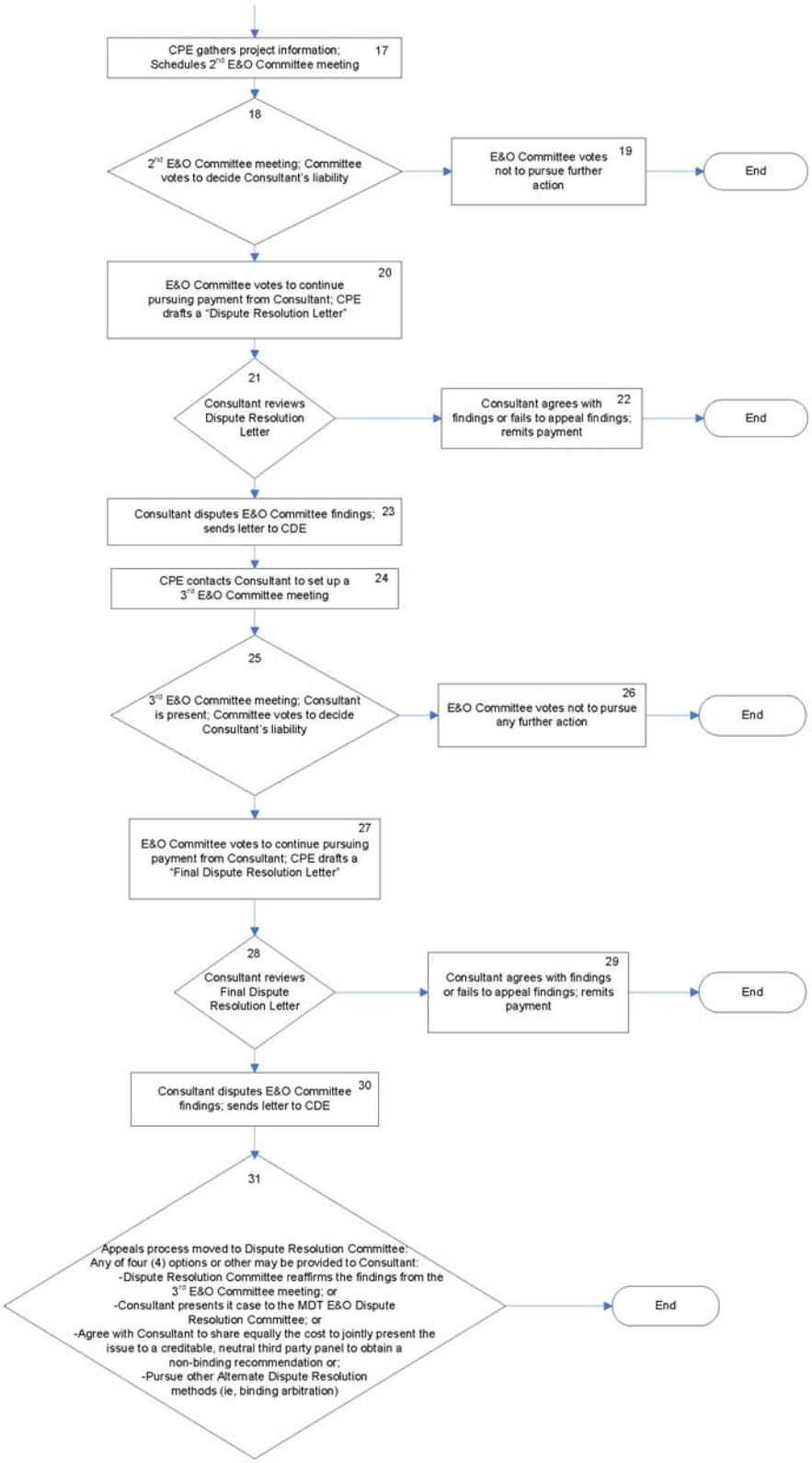

Figure 12.2-A — ERRORS AND OMISSIONS RESOLUTION PROCEDURE
(Continued)

1. Box 1. The identification of a possible significant error and/or omission will trigger the implementation of this procedure. Initial implementation of this procedure does not necessarily imply an error and/or omission has occurred nor does it indicate an imminent charge to the Consultant. This procedure is intended to protect both the Department and the Consultant should it be determined that an error and/or omission has occurred.

2. Box 2. The Project Manager will notify the Consultant Design Engineer and Bridge Design Engineer (if the problem is bridge related) of the potential issue. Notification of the Consultant Design Engineer (CDE) and Bridge Design Engineer are not required prior to contacting the Consultant but is preferred in the case of non-time-critical issues. The CDE will determine which Consultant Project Engineer (CPE) will be addressing the problem and advise the Project Manager. The CPE will be the primary point of contact for the Project Manager. The CPE will assist with the solution, as necessary, and aid in communication between the Department and the Consultant. The Project Manager will contact the Consultant directly and discuss possible solutions. The Department is contractually obligated to provide the Consultant with an opportunity to be involved with the solution process. The Project Manager will advise the CPE of the solution process.

3. Box 3. The Consultant Design Engineer, in consultation with the Consultant Project Engineer, the Consultant and, with the aid of various members within the Department (if necessary), will evaluate and determine if the error and/or omission (E&O) procedure should be further implemented. If the CDE decides to implement the procedure, the CDE will send a letter via certified mail to the Consultant notifying the firm of the potential E&O. The Consultant Project Engineer will copy the letter to the Project Manager. The letter is necessary to satisfy the contractual obligations between the Department and the Consultant.

4. Box 4. If it is determined that the E&O procedure will not be implemented, the Project Manager will take corrective action to find a solution. The Project Manager will use available resources (which may include the Department and/or the Consultant) to find an appropriate solution. When requested by the Department, the Consultant will provide assistance to determine a solution.

5. Box 5. When it is determined that the E&O procedure should be further implemented, the Project Manager will begin tracking costs associated with the solution. This includes MDT time spent researching and implementing the solution and notifying the Contractor to maintain a tally of costs directly attributed to the E&O. The Consultant Project Engineer will begin charging time spent researching a solution and negotiating with the Consultant. The time charged should be to Account 9402, Activity 067, Project UPN and the construction agreement number.

6. Box 6. The Project Manager and the Consultant will work together to determine an acceptable solution. The Project Manager is encouraged to use the Consultant Project Engineer, as necessary, during the process. If the Project Manager encounters difficulty in working with the Consultant during any stage of the solution process, he/she should immediately contact the CPE.

7. Box 7. The Project Manager will write a change order and implement the solution.

8. Box 8. The Project Manager will summarize and submit the E&O Package, which must include narrative description, recommendations and final costs to Consultant Project Engineer within 60 calendar days of the change order. If the E&O Package includes more than one E&O issue, each issue should be summarized independently. The narrative should include a justification and explain the cost. The Project Manager should include all associated Contractor costs and field personnel time/costs (time charged as shown in Box 5). See Example "Memo from the Project Manager to Consultant Project Engineer" as a template for the Project Manager to use.

9. Box 9. The Project Manager will complete a Consultant Rating Form (found on the MDT intranet site) to identify the strengths and weaknesses of the Consultant during the solution process. It is not intended to be tied to the potential amount of funds owed back to the Department but should rate the Consultant's performance. Forms should be completed within 30 calendar days of submitting the E&O Package and should be submitted to the Consultant Project Engineer.

10. Box 10. The Consultant Project Engineer compiles all appropriate MDT time and costs. During this process, it is imperative to coordinate with the Engineering Division's Fiscal Officer and Construction Administration Services Bureau to ensure that all costs are captured appropriately. The CPE will schedule the first meeting of the E&O Committee to occur within 30 calendar days of receiving the E&O Package from the Project Manager. The E&O Committee members are the Preconstruction Engineer, Construction Engineer and District Construction Engineer. The CPE will invite others to this meeting, if necessary.

11. Box 11. The first meeting of the E&O Committee will review all of the compiled data presented by the Consultant Project Engineer. The Committee will vote to determine the Consultant's liability (or portion thereof) with regard to each E&O issue. The CPE will document the Committee meeting findings with meeting minutes and distribute them through the Consultant Design Engineer to the appropriate personnel.

12. Box 12. The E&O Committee votes not to pursue further action. The Consultant Project Engineer will draft a letter, for the Consultant Design Engineer's signature, to the Consultant explaining the Committee findings; no further action will be taken, and the E&O issue is closed.

13. Box 13. The E&O Committee votes to pursue payment from the Consultant. Within 14 calendar days of the first E&O Committee meeting, the Consultant Project Engineer will draft a "Payment Request Letter," for the Consultant Design Engineer's signature, to the Consultant explaining in detail the findings of the E&O Committee. The CDE will consult with the Legal Services Unit, as necessary. The letter will be sent via certified mail. All appropriate personnel must be copied, especially the Engineering Division's Fiscal Officer, Construction Administration Services Bureau and the E&O Committee members.

14. Box 14. The Consultant reviews the Payment Request Letter and decides what action it will take.

15. Box 15. If the Consultant agrees with the findings in the Payment Request Letter within 14 calendar days of receiving the certified letter, the Consultant will remit payment to:

    Montana Department of Transportation
    Attention: Supervisor, Payment Collections Section
    2701 Prospect Avenue
    Helena, MT 59620

    If the Consultant fails to provide written notification of its intent to appeal within 14 calendar days of receiving the Payment Request Letter, the Consultant loses the right to appeal the E&O Committee findings. The Consultant Project Engineer will draft a letter for the Consultant Design Engineer's signature notifying the Consultant of payment due.

16. Box 16. If the Consultant disputes the E&O Committee findings, the Consultant is required to provide written notification within 14 calendar days to the Consultant Design Engineer stating that it is initiating the appeal process. The written notification from the Consultant should be specific to the points under dispute and provide back-up to support the Consultant's rationale.

17. Box 17. The Consultant Project Engineer schedules a second meeting of the E&O Committee to occur within 14 calendar days of receiving the Consultant's letter requesting appeal. The CPE will be responsible for compiling all relevant information from the project file related to the Consultant's points of dispute. This information will assist the E&O Committee in its deliberation and discussion.

18. Box 18. The second meeting of the E&O Committee reviews the Consultant's letter and the compiled information provided by the Consultant Project Engineer. The Committee will vote to decide the Consultant's liabilities (or portion thereof) with regard to the Consultant's appeal. The CPE will document the Committee meeting findings with meeting minutes and distribute them through the Consultant Design Engineer to the appropriate personnel.

19. Box 19. The E&O Committee votes not to pursue further action. The Consultant Project Engineer will draft a letter, for the Consultant Design Engineer's signature, to the Consultant explaining that, after the second review of the Committee, no further action will be taken and the E&O issue is closed.

20. Box 20. The E&O Committee votes to pursue payment from the Consultant. Within 14 calendar days, the Consultant Project Engineer will draft a "Dispute Resolution Letter," for the Consultant Design Engineer's signature, to the Consultant explaining, in detail, the findings of the E&O Committee. The CDE will consult with the Legal Services Unit, as necessary. The letter will be sent via certified mail. All appropriate personnel must be copied, including the Engineering Division's Fiscal Officer, Construction Administration Services Bureau and the E&O Committee members.

21. Box 21. The Consultant reviews the Dispute Resolution Letter and decides what action it will take.

22. Box 22. If the Consultant agrees with the findings in the Dispute Resolution Letter, the Consultant will remit payment within 14 days to the address shown in Box 15. If the Consultant fails to provide written notification of its intent to appeal within 14 calendar days of receiving the Dispute Resolution Letter, the Consultant loses the right to appeal the E&O Committee findings. The Consultant Project Engineer will draft a letter for the Consultant Design Engineer's signature notifying the Consultant of payment due.

23. Box 23. If the Consultant disputes the E&O Committee findings, the Consultant is required to provide written notification within 14 calendar days to the Consultant Design Engineer stating that it is still disputing the findings of the E&O Committee and will continue the appeals process.

24. Box 24. The Consultant Project Engineer will contact the Consultant to set a date and time that the Consultant will present its case in-person to the E&O Committee. This meeting should occur within 14 calendar days of receiving the letter from the Consultant.

25. Box 25. The third meeting of the E&O Committee reviews all previous Consultants letters and the compiled information provided by the Consultant Project Engineer. Additionally, the Consultant will be present to answer questions and provide further information/clarification. Every attempt should be made to reach a resolution based on the facts of the issue(s). The Committee will vote to decide the Consultant's liabilities (or portion thereof) with regard to the Consultant's appeal. The CPE will document the Committee meeting findings with meeting minutes and distribute them through the Consultant Design Engineer to the appropriate personnel.

26. Box 26. The E&O Committee votes not to pursue further action against the Consultant. Within 14 calendar days of the Committee meeting, the Consultant Project Engineer will draft a letter, for the Consultant Design Engineer's signature, to the Consultant explaining that, after the third review of the Committee, no further action will be taken and the E&O issue is closed.

27. Box 27. The E&O Committee votes to pursue payment from the Consultant. Within 14 calendar days, the Consultant Project Engineer will draft a "Final Dispute Resolution Letter," for the Consultant Design Engineer's signature, to the Consultant explaining in detail the findings of the E&O Committee. The CDE will consult with the Legal Services Unit, as necessary. The letter will be sent via certified mail. All appropriate personnel must be copied, including the Engineering Division's Fiscal Officer, Construction Administration Services Bureau and the E&O Committee members.

28. Box 28. The Consultant reviews the Final Dispute Resolution Letter and decides what action it will take.

29. Box 29. If the Consultant agrees with the findings in the Final Dispute Resolution Letter, the Consultant will remit payment within 14 days to the address shown in Box 15. If the

Consultant fails to provide written notification of the its intent to appeal within 14 calendar days of receiving the Final Dispute Resolution Letter, the Consultant loses the right to appeal the E&O Committee findings. The Consultant Project Engineer will draft a letter for the Consultant Design Engineer signature notifying the Consultant of payment due.

30. Box 30. If the Consultant disputes the E&O Committee findings, the Consultant is required to provide written notification within 14 calendar days to the Consultant Design Engineer stating that it is still disputing the findings of the E&O Committee.

31. Box 31. At this point, the appeals process will be moved to the Dispute Resolution Committee. The Dispute Resolution Committee members are the Chief Engineer, Chief Legal Counsel and an ACEC representative.

Within 14 calendar days of receiving the Consultant's letter, the Consultant Design Engineer will schedule a meeting to convene the Dispute Resolution Committee. The CDE will inform the Committee of all actions that have occurred. The Dispute Resolution Committee will consider this information and direct one of the options listed below or any additional option to be offered to the Consultant. Prior to the letter being sent to the Consultant, the Chief Operations Officer will receive approval from the Director's office of the option put forth in the letter. This letter is signed by the Consultant Design Engineer and is sent to the Consultant within 14 calendar days of the Dispute Resolution Committee's decision. The options include:

- The Dispute Resolution Committee reaffirms the findings from the third E&O Committee meeting.
- The Consultant presents its case to the MDT E&O Dispute Resolution Committee.
- The Dispute Resolution Committee agrees with the Consultant to share equally the cost to jointly present the issue to a creditable, neutral third party panel to obtain a non-binding recommendation.
- The Dispute Resolution Committee pursues other Alternative Dispute Resolution methods (e.g., binding arbitration).

12.2.3 Workers Compensation

Montana State law requires that all businesses operating in the State carry workers compensation insurance. This insurance covers workers injured on the job, whether they are hurt on the workplace premises or elsewhere, or in auto accidents while on business. It also covers work-related illnesses. The insurance protects employers from lawsuits resulting from workplace accidents and provides medical care and compensation for lost income to employees hurt in workplace accidents.

Workers compensation provides payments to injured workers, without regard to who was at fault in the accident, for time lost from work and for medical and rehabilitation services. It also provides death benefits to surviving spouses and dependents.

Per the Standard Agreement documents the Consultant requirement for workers compensation insurance.

12.3 LICENSES/REGISTRATION/COMPLIANCE WITH LAWS

In general, the Consultant must secure all licenses and obtain all registrations necessary for the lawful performance of its work. On MDT projects, one or more of the following may be required to provide professional services to the Department:

- proof that the Consultant firm has been authorized by the Montana Board of Professional Engineers and Land Surveyors to engage in the required services (see the Standard Agreement);
- proof that the applicable Consultant personnel are licensed professional engineers in their respective fields of practice or licensed land surveyors in the State of Montana (see the Standard Agreement);
- proof that the Consultant is registered to do business in the State of Montana with the Secretary of State's office. A Certificate of Existence is needed for in-State corporations, and a Certificate of Authorization is needed for corporations outside of the State of Montana; and
- general compliance with existing laws, ordinances and regulations of the Standard Agreement.

12.4 CERTIFICATES/DISCLOSURES

The MDT Standard Agreement includes the following certificates and disclosures.

12.4.1 Exhibit A "Certificate of Consultant"

This Exhibit requires that the Consultant certify or disclose that it:

- has not used an outside firm or individual to solicit the contract from MDT;
- currently is not under disbarment, has not been convicted of any civil judgments or criminal offenses, and has not had a public transaction terminated in the last three years; and
- has not used Federal funds for any lobbying activities and will disclose any non-Federal funds paid for lobbying activities in connection with this contract.

12.4.2 Exhibit B "Non-Discrimination Notice"

This Exhibit requires that the Consultant will comply with all Federal and State laws, which are enumerated in Exhibit B, prohibiting any discriminatory practices relating to:

- nondiscrimination,
- compliance with Montana Governmental Code of Fair Practices,
- compliance with Americans with Disabilities Act, and
- compliance with participation by Disadvantaged Business Enterprises.

12.5 ISSUE RESOLUTION

MDT policy is to take all necessary proactive measures to avoid and minimize any disputes and, especially, to avoid litigation. The key element to issue avoidance is early notification of any potential problems by either MDT or the Consultant. The MDT Standard Agreement either explicitly or implicitly incorporates this principle. For example, the Standard Agreement states the following:

- MDT must provide prompt written notice to the Consultant of any developments that affect the scope or schedule for Consultant services.
- MDT requires conferences to be held as necessary to discuss matters pertinent to work progress.
- MDT requires that Consultants include monthly progress reports plus their invoices, which should address any issues that may have adversely affected the progress of work.

When issues do arise, MDT and the Consultant must take all reasonable efforts to resolve the issue informally and in a timely manner. On a Project or Special Project, the Consultant Project Engineer will be the primary point of contact. On Term Contracts, the MDT functional unit responsible for the Consultant project will be the primary point of contact.

If an impasse is reached, informally or formally, then:

- Formal notification must be in writing.
- Notification should go to the CPE and ultimately to the CDE.

12.6 DBE REQUIREMENTS

The Civil Rights Bureau is responsible for the MDT Disadvantaged Business Enterprise (DBE) program. The Bureau has published the *MDT DBE Program Manual* to document the Department's policies and procedures on DBE participation. The Bureau also maintains the "MDT DBE Directory," which lists those firms in the State of Montana that meet the Department's requirements for DBE certification.

Article IV, Section 12 of the MDT Standard Agreement documents DBE requirements on Consultant projects. MDT establishes an annual DBE goal for all aspects of transportation-related contracting including Consultant design that is approved by FHWA. All projects are required to meet or exceed the DBE goal. The DBE Program monitors projects throughout the year and will set project-specific goals on all contracts if the overall DBE goal is not being met. The DBE Program also monitors all contracts to ensure that good-faith efforts are being met as described in the *MDT DBE Program Manual*. If a DBE firm is used, each invoice submitted by the Consultant must document the current and cumulative payments to the DBE firm.

Subject **Section**

- A -

- B -

- C -

Subject **Section**

Subject **Section**

- D -

- E -

- F -

- G -

- H -

Subject **Section**

- I -

- P -

Subject **Section**

- T -

Subject **Section**

- U -

- V -

- W -

- X / Y / Z -